Inventory of Paleozoic radiolarian species (1880-2016)

Jonathan C. AITCHISON
School of Earth and Environmental Sciences,
University of Queensland, St Lucia, Qld 4072 (Australia)
jona@uq.edu.au (corresponding author)

Noritoshi SUZUKI
Department of Earth Science, Graduate School of Science,
Tohoku University, 6-3 Aoba, Aramaki, Aoba-ku, Sendai 980-8578 (Japan)
norinori@m.tohoku.ac.jp

Luis O'DOGHERTY
Facultad de Ciencias del Mar, Universidad de Cadiz,
E-11510 Puerto Real (Spain)
luis.odogherty@uca.es

Published on 29 September 2017

urn:lsid:zoobank.org:pub:9072CEF3-2F28-415D-A239-24E6A55DC3E6

Aitchison J. C., Suzuki N. & O'Dogherty L. 2017. — Inventory of Paleozoic radiolarian species (1880-2016), *in* Danelian T., Caridroit M., Noble P. & Aitchison J. C. (eds), Catalogue of Paleozoic radiolarian genera. *Geodiversitas* 39 (3): 533-637. https://doi.org/10.5252/g2017n3a6

ABSTRACT
This paper presents, for the first time, a complete list of Paleozoic radiolarian species (mainly Polycystina) described between 1880 and early 2016. It records 2323 names of taxa described originally as new species or subspecies that have been assigned to radiolarians. This list attempts to only provide an objective record without revision of taxonomic status, and thus includes invalid taxa, junior objective or subjective synonyms, *nomina dubia* and *nomina nuda*.

KEY WORDS
Paleozoic, radiolarians, polycystina, inventory.

RÉSUMÉ
Inventaire des espèces de radiolaires du Paléozoïque (1880-2016).
Cet article présente, pour la première fois, une liste complète d'espèces de radiolaires du Paléozoïque (principalement des polycystines) décrites entre 1880 et début 2016. Il contient 2323 noms de taxons, décrits à l'origine comme des nouvelles espèces ou sous-espèces, affectées aux radiolaires. Cette liste vise donc à en fournir un état objectif, sans révision de leur statut taxonomique, et comprend donc des taxons valides, des synonymes juniors objectifs ou subjectifs, des *nomina dubia* et *nomina nuda*.

MOTS CLÉS
Paléozoïque, radiolaires, polycystines, inventaire.

OBJECTIVES

Following the publication of the Inventory of Mesozoic radiolarian species (O'Dogherty 2009) there was general agreement of participants in workshops held by the Paleozoic Working Group that it would be useful for the community of researchers if a similar document could be produced for Paleozoic radiolarians.

Here we present a comprehensive list of all the Paleozoic radiolarian species of which we are aware that have been described between the late 1800s and early 2016. The intention is to provide in a single file, the names of all Paleozoic species that have been published. All names listed are the original names given in the original publication, and do not reflect any subsequent taxonomic revision or evaluation as to their validity and assignment at higher taxonomic levels. The list records 2323 taxa described originally as either new species or subspecies. Although every attempt has been made to be as complete as possible it is perhaps inevitable that some taxa may be missing. The purpose of this list is to provide information on: 1) the original Linnean combination used when a species was erected as new in Paleozoic material; 2) the author(s) and page(s) on which it is described; 3) the age of the holotype or of the name-bearing type as originally published (note in some cases there may have been considerable revision of the original age determination); and 4) the order to which the species or sub-species belongs (the numbers of which are indicated in parentheses with each order): **Al**, Albaillellaria (363); **Ar**, Archaeospicularia (154); **E**, Entactinaria (726); **L**, Latentifistularia (194); **?N**, possible Nassellaria (111); **S**, Spumellaria (207); **IS**, incertae sedis within orders (72), incertae sedis in both order and family (35), with 368 names that can be regarded as *nomina dubium* (**n.d.**) and 158 names introduced as *nomina nuda* (**n.n.**). Forty-four taxa are clearly not radiolarians (**n.r.**) with 15 of these Calcarea and five others that can be assigned as sponge spicules (**s.s.**) also identified. Eleven names are invalid. Type species (**T**, valid type species; **Td**, types that are *nomina dubia*; **Th**, types that are homonyms; **Ti**, type species that are invalid names; and **Ts**, types that are synonyms) are indicated.

COMPILATION OF SPECIES NAMES

The list of taxa has been compiled following a detailed search of >1250 publications dealing with Paleozoic radiolarians of which 259 introduce new taxa. Synonyms and species descriptions are not included because this is beyond the scope of the project and would require several years of work by many research groups. The general agreement of participants at the workshops was that it would be useful to take this opportunity to make a step towards addressing species-level taxonomy of species once the revision of genera has been fully achieved. Such a work would have the additional benefit of providing a better-defined starting point for future taxonomists.

FUTURE WORK

Objective evaluation of each species with respect to its taxonomic status and the subjective assignment to valid genera is the next step towards attaining a full proper standard of taxonomy and stratigraphy for Paleozoic radiolarians. Evaluation of each species, unless one is personally familiar with it, is a time-consuming task depending on the availability of literature and given that there are 2323 species names to be evaluated is well beyond the scope of this particular work, which is meant to focus on the genera. However, we emphasize that the species treatment is a logical future task of the Paleozoic Working Group. It is our intention herein to simply provide this list as a useful starting point for any such study.

Acknowledgements
We thank all our fellow radiolarian researchers who have, in various ways, contributed to the accumulation of the body of data that has allowed development of this biozonation. JA thanks Sarah Kachovich for her help in editing this list and he also acknowledges financial support towards investigation of Early Paleozoic radiolarian evolution in the form of a grant from the Australian Research Council (ARC DP 1501013325). We also gratefully acknowledge reviews by Taniel Danelian and Paula Noble.

REFERENCES

ABERDEEN E. 1940. — Radiolarian fauna of the Caballos Formation, Marathon Basin, Texas. *Journal of Paleontology* 14 (2): 127-139. http://www.jstor.org/stable/1298566

AFANASIEVA M. S. 1986. — Radiolarians of the family Pylentonemidae. *Paleontological Journal* 3: 22-34.

AFANASIEVA M. S. 1993. — New data on the Early Paleozoic radiolarian genus *Caspiaza*. *Paleontological Journal* 4: 115-118.

AFANASIEVA M. S. 1997a. — Early Frasnian Radiolarians and their biostratigraphical significance. *Doklady Akademii Nauk* 355 (2): 217-222.

AFANASIEVA M. S. 1997b. — *Moscovistella victoralis*; the victorious star of Moscow. *Izvestija Vysshikh Uchebnykh Zavedeniy. Geologiya i Razvedka* 5: 38-41.

AFANASIEVA M. S. 2000a. — *Atlas of Paleozoic Radiolaria of the Russian Platform.* Scientific World, Moscow, 477 p.

AFANASIEVA M. S. 2000b. — New radiolarians of the superfamily Entactinoidea from the Upper Devonian of Timan-Pechora Province, Russia. *Paleontological Journal* 34 (2): 131-146.

AFANASIEVA M. S. 2000c. — New radiolarians of the orders Aculearia and Sphaerellaria from the Upper Devonian of the Timan-Pechora Province (Russia). *Paleontological Journal* 34 (4): 359-376.

AFANASIEVA M. 2011. — Revision of the genus *Entactinosphaera* Foreman, 1963 and the new genus *Retientactinosphaera* gen. nov. (Paleozoic radiolaria). *Paleontological Journal* 45 (2): 117-129. https://doi.org/10.1134/S003103011102002X

AFANASIEVA M. S. & AMON E. 2008. — New radiolarians from the Devonian of the southern Ural Mountains: 1. Early-Middle Devonian (Late Emsian-Early Eifelian). *Paleontological Journal* 42 (2): 451-467.

AFANASIEVA M. S. & AMON E. O. 2009a. — New Radiolarians from the Devonian of the Southern Ural Mountains: 2. Middle–Late Devonian. *Paleontological Journal* 43 (1): 34-49.

AFANASIEVA M. S. & AMON E. O. 2009b. — Evolution of Devonian biodiversity of radiolarians with two porous spheres and one main spine. *Paleontological Journal* 43 (5): 483-498. https://doi.org/10.1134/S0031030109050037

AFANASIEVA M. S. & AMON E. O. 2011. — Devonian Radiolarians of Russia. *Paleontological Journal* 45 (11): 1313-1532. https://doi.org/10.1134/S0031030111110013
AFANASIEVA M. S. & AMON E. O. 2012. — New Middle Devonian radiolarians from western Mugodzhary. *Paleontological Journal* 46 (6): 549-551. https://doi.org/10.1134/S0031030112060020
AFANASIEVA M. S. & AMON E. O. 2016. — New radiolarian genera and species from the Lower Permian of the Southern Urals and Northern Mugodzhary. *Paleontological Journal* 50 (3): 209-221. https://doi.org/10.1134/S0031030116020027
AITCHISON J. C. 1993a. — *Albaillellaria* from the New England orogen, Eastern NSW, Australia. *Marine Micropaleontology* 21 (4): 353-367. https://doi.org/10.1016/0377-8398(93)90026-T
AITCHISON J. C. 1993b. — Devonian (Frasnian) Radiolarians from the Gogo Formation, Canning Basin, Western Australia. *Palaeontographica Abteilung A: Paleozoologie-Stratigraphie* 228 (4-6): 105-128.
AITCHISON J. C. 1998. — A Lower Ordovician (Arenig) radiolarian fauna from the Ballantrae Complex, Scotland. *Scottish Journal of Geology* 34 (1): 73-81. https://doi.org/10.1144/sjg34010073
AITCHISON J. C., HADA S., IRELAND T. & YOSHIKURA S. 1996. — Ages of Silurian radiolarians from the Kurosegawa terrane, Southwest Japan constrained by U/Pb shrimp data. *Journal of Southeast Asian Earth Sciences* 14 (1-2): 53-70. https://doi.org/10.1016/S0743-9547(96)00045-1
AITCHISON J. C., FLOOD P. G. & MALPAS J. 1998. — Lowermost Ordovician (basal Tremadoc) radiolarians from the Little Port Complex, western Newfoundland (Lower Ordovician radiolarians, Newfoundland). *Geological Magazine* 135 (3): 413-419. https://doi.org/10.1017/S001675689800867X
AITCHISON J. C., DAVIS A. M., STRATFORD J. M. C. & SPILLER F. C. P. 1999. — Lower and Middle Devonian radiolarian biozonation of the Gamilaroi terrane New England Orogen, eastern Australia. *Micropaleontology* 45 (2): 138-162. https://doi.org/10.2307/1486110
AMON E. O. & BRAUN A. 1994. — Radiolarians from lower Permian deposits of the Belskaya depression, Bashkiria (west slope of southern Urals; Artinskian stage, Burtsevsky horizon), *in* NAIRN A. E. M. & KOROTEEV A. V. (eds), *Contributions to Eurasian Geology; Permian Conference Papers*. Occasional Publications ESRI, Columbia, USA 9: 1-7.
AMON E. O., BRAUN A. & CHUVASHOV B. I. 1990. — Lower Permian (Artinskian) Radiolaria from the Sim type section, Southern Urals. *Geologica et Palaeontologica* 24: 115-137.
AMON E. O., BRAUN A. & IVANOV K. S. 1995. — Upper Silurian radiolarians from the southern Urals. *Geologica et Palaeontologica* 29: 1-18.
BELYANSKY G. S., NIKITA A. P. & RUDENKO V. S. 1984. — About Sebuchaz suite of Primorye, *in* POYARKOVA Z. N. (ed.), *New Data an Detail Biostratigraphy of Phanerozoic of Far East*. DVNC Akademii Nauk SSSR, Vladivostok: 43-57.
BENGTSON S. 1986. — Siliceous microfossils from the Upper Cambrian of Queensland. *Alcheringa* 10 (3): 195-216. https://doi.org/10.1080/03115518608619155
BOUNDY-SANDERS S. Q., SANDBERG A. A., MURCHEY B. L. & HARRIS A. G. 1999. — A late Frasnian (Late Devonian) radiolarian, sponge spicule, and conodont fauna from the Slaven Chert, northern Shoshone Range, Roberts Mountains allochton, Nevada. *Micropaleontology* 45 (1): 62-68. https://doi.org/10.2307/1486203
BRAUN A. 1989. — Neue unterkarbonische Radiolarien-Taxa aus Kieselschiefer-Gerollen des unteren maintales be Frankfurt a. M. *Geologica et Palaeontologica* 23: 83-99.
BRAUN A. 1990. — Radiolarien aus dem Unter-Karbon Deutschlands. *Courier Forschungs Institut Senckenberg* 133: 1-177.
BRAUN A., MAASS R. & SCHMIDT-EFFING R. 1992. — Oberdevonische Radiolarien aus dem Breuschtal (Nord-Vogesen, Elsas) und ihr regionaler und stratigraphischer Zusammenhang. *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen* 185 (2): 161-178.
BYKOVA E. V. 1955. — Foraminifery i radiolyarii devona volgo-uralskoi oblasti i tsentralnogo devonskogo polya i iz znachenie dlya stratigrafii [Foraminifera and radiolarians of the Devonian of the Volga-Ural area]. *Proceedings of the All Union Petroleum Scientific Research Institute for Geological Survey (VNIGRI), new series* 87: 5-189.
CARIDROIT M. & DE WEVER P. 1984. — Description de quelques nouvelles espèces de Follicucullidae et d'Entactinidae (Radiolaires polycystines) du Permien du Japon. *Geobios* 17 (5): 639-644. https://doi.org/10.1016/S0016-6995(84)80035-2
CARIDROIT M. & DE WEVER P. 1986. — Some late Permian radiolarians from pelitic rocks of the Tatsunoformation (Hyogo Prefecture), Southwest Japan. *Marine Micropaleontology* 11: 55-90. https://doi.org/10.1016/0377-8398(86)90005-8
CARIDROIT M., DANELIAN T., O'DOGHERTY L., CUVELIER J., AITCHISON J. C., POUILLE L., NOBLE P., DUMITRICA P., SUZUKI N., KUWAHARA K., MALETZ J. & FENG Q. 2017. — An illustrated catalogue and revised classification of Paleozoic radiolarian genera, *in* DANELIAN T., CARIDROIT M., NOBLE P. & AITCHISON J. C. (eds), Catalogue of Paleozoic radiolarian genera. *Geodiversitas* 39 (3): 363-417. https://doi.org/10.5252/g2017n3a3
CATALANO R., DI STEFANO P. & KOZUR H. 1989. — Lower Permian Albaillellacea (Radiolaria) from Sicily and their stratigraphic and paleogeographic significance. *Rendiconto dell'Accademia delle Scienze fisiche e matematiche, Serie IV* 56: 1-24.
CHAPMAN F. 1923. — Report on fossils from an Upper Cambrian horizon at Loyola, near Mansfield. *Bulletin of the Geological Survey of Victoria* 46: 34-45.
CHENG Y.-N. 1986. — *Taxonomic Studies on Upper Paleozoic Radiolaria*. National Museum of Natural Science, Taiwan, Special Publication, vol. 1, 310 p.
CONWAY MORRIS S. & CHEN M. 1990. — *Blastulospongia polytreta* n.sp. an enigmatic organism from the Lower Cambrian of Hubei, China. *Journal of Paleontology* 64 (1): 26-30. https://doi.org/10.1017/S0022336000042207
CORDEY F. 1998. — Radiolaires des complexes d'accrétion de la Cordillère Canadienne (Colombie-Britannique). *Geological Survey of Canada, Bulletin* 509: 1-209.
CORNELL W. C. & SIMPSON R. D. 1985. — New Permian albaillellid radiolarians from West Texas. *Micropaleontology* 31 (3): 271-279. https://doi.org/10.2307/1485545
CORNELL W. C. & SIMPSON R. D. 1986. — *Nabespecha leonardia*, n. gen., n. sp.: An unusual radiolarian from the Permian of West Texas. *Micropaleontology* 32 (3): 286-288. https://doi.org/10.2307/1485623
DANELIAN T. & FLOYD J. D. 2001. — Progress in describing Ordovician siliceous biodiversity from the Southern Uplands (Scotland, U.K.). *Transactions of the Royal Society of Edinburgh: Earth Sciences* 91 (3-4): 489-498. https://doi.org/10.1017/S0263593300008336
DANELIAN T. & POPOV L. 2003. — Ordovician radiolarian biodiversity: insights based on new and revised data from Kazakhstan. *Bulletin de la Société géologique de France, Série VIII* 174 (4): 325-335. https://doi.org/10.2113/174.4.325
DANELIAN T., POPOV L. E., TOLMACHEVA T. Y., GHOBADI POUR M. G., NEYEVIN A. V. & MIKOLAICHUK A. V. 2011. — Ordovician radiolaria and conodonts from the peri-Gondwanan Karatau-Naryn microplate (Sarydzhaz, eastern Kyrgyzstan). *Geobios* 44 (6): 587-599. https://doi.org/10.1016/j.geobios.2011.02.006
DE WEVER P. & CARIDROIT M. 1984. — Description de quelques nouveaux Latentifistulidae (radiolaires polycystines) Paléozoïques du Japon. *Revue de Micropaléontologie* 27 (2): 98-106.
DEFLANDRE G. 1952. — *Albaillella* nov. gen., radiolaire fossile du Carbonifère inférieur, type d'une lignée aberrante éteinte. *Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences (Paris), Série D: Sciences naturelles* 234: 872-874. http://gallica.bnf.fr/ark:/12148/bpt6k3186w
DEFLANDRE G. 1953. — Radiolaires fossiles, *in* GRASSÉ P. P. (ed.), *Traité de Zoologie*. Masson, Paris: 389-436.
DEFLANDRE G. 1955. — *Palaeocryptidium* n.g. *cayeuxi* n.sp., microorganismes *incertae sedis* des phtanites briovériens bretons. *Comptes Rendus sommaire de la Société géologique de France* 9-10: 182-185.

DEFLANDRE G. 1958. — *Lapidopiscum* nov. gen., type nouveau de Radiolaire viséen, famille des Lapidopiscidae fam. nov., de l'ordre des Albaillellidae Defl. 1953. *Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences (Paris), Série D: Sciences naturelles* 246: 2278-2280. http://gallica.bnf.fr/ark:/12148/bpt6k723q

DEFLANDRE G. 1960. — À propos du développement des recherches sur les Radiolaires fossiles. *Revue de Micropaléontologie* 2 (4): 212-218.

DEFLANDRE G. 1963. — *Pylentonema*, nouveau genre de Radiolaire du Viséen : Sphaerellaire ou Nassellaire ? *Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences (Paris), Série D : Sciences naturelles* 257: 3981-3984. http://gallica.bnf.fr/ark:/12148/bpt6k4009k

DEFLANDRE G. 1964. — La famille des Popofskyellidae fam. nov. et le genre *Popofskyellum* Defl., Radiolaires viséens de la Montagne Noire. *Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences (Paris), Série D : Sciences naturelles* 259: 3055-3058. http://gallica.bnf.fr/ark:/12148/bpt6k4015m

DEFLANDRE G. 1972a. — Le système trabéculaire interne chez les Pylentonémidés et les Popofskyellidés, Radiolaires du Paleozoique. Phylogenèse des Nassellaires. *Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences (Paris), Série D: Sciences naturelles* 274 (26): 3535-3540. http://gallica.bnf.fr/ark:/12148/bpt6k5682741m

DEFLANDRE G. 1972b. — Remarques complémentaires sur la morphologie et la nomenclature de quelques genres de Radiolaires du Paléozoïque. *Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences (Paris), Série D: Sciences naturelles* 275 (1): 13-16. http://gallica.bnf.fr/ark:/12148/bpt6k57786873

DEFLANDRE G. 1973a. — Sur quelques nouveaux types de radiolaires Polycystines viséens, d'attribution systématique ambiguë, certains évoquant à la fois des Plectellaires et des Spumellaires. *Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences (Paris), Série D : Sciences naturelles* 276: 289-293. http://gallica.bnf.fr/ark:/12148/bpt6k5803214k

DEFLANDRE G. 1973b. — Compléments historiques et taxinomiques sur les Radiolaires viséens. Remarques critiques sur les Plectellaires. *Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences (Paris), Série D: Sciences naturelles* 276 (1): 497-500. http://gallica.bnf.fr/ark:/12148/bpt6k5803214k

DEFLANDRE G. 1973c. — Observations et remarques sur les Radiolaires Sphaerellaires du Paléozoïque, à propos d'une nouvelle espece, viséenne, du genre *Foremaniella* Defl., parfait intermediaire entre les Périaxoplastidiés et les Pylentonémidés. *Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences (Paris), Série D: Sciences naturelles* 276 (1): 1147-1151. http://gallica.bnf.fr/ark:/12148/bpt6k5803214k

DEFLANDRE G. 1973d. — Sur quelques nouvelles espèces d'*Archocyrtium*, radiolaires Pylentonemidae du Viséen de Cabrières. *Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences (Paris), Série D : Sciences naturelles* 277: 149-152. http://gallica.bnf.fr/ark:/12148/bpt6k5474901n

DEFLANDRE G. & DEFLANDRE-RIGAUD M. 1958. — Données paléontologiques sur l'ontogenèse de la coque des radiolaires Sphaerellaires. Conséquences taxonomiques. *Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences (Paris), Série D: Sciences naturelles* 246 (6): 968-970. http://gallica.bnf.fr/ark:/12148/bpt6k3198s

DEMANET F. 1938. — La faune des Couches de passage du Dinantien au Namurien dans le synclinorium de Dinant. *Mémoires du Musée royal d'Histoire naturelle de Belgique* 84: 1-201.

DONG X. P., KNOLL A. H. & LIPPS J. H. 1997. — Late Cambrian Radiolaria from Hunan, China. *Journal of Paleontology* 71 (5): 753-758. https://doi.org/10.1017/S002233600003571X

FENG Q. 1992. — Permian and Triassic radiolarian biostratigraphy in south and southwest China. *Journal of China University of Geosciences* 3 (1): 51-62.

FENG Q. & LIU B. 1992. — One new species of early Devonian radiolarian from west Yunnan. *Science in China, Series D: Earth Sciences* 35 (5): 549-553.

FENG Q. & LIU B. 1993. — Permian radiolarian in southwest Yunnan. *Earth Science, Journal of China University of Geosciences* 18 (5): 540-564.

FENG Q. & YE M. 1996. — Radiolarian stratigraphy of Devonian through Middle Triassic in southwestern Yunnan, *in* FANG N. & FENG Q. (eds), *Devonian to Triassic Tethys in Western Yunnan, China*. China University of Geosciences Press, Wuhan: 15-22.

FENG Q. & GU S. 2002. — Uppermost Changxingian (Permian) radiolarian fauna from southern Guizhou, southwestern China. *Journal of Paleontology* 76 (5): 797-809. https://doi.org/10.1017/S0022336000037483

FENG Q., MEI Y. & ZHANG Z. 1997. — Early Carboniferous radiolarians from western Yunnan. *Acta Micropalaeontologica Sinica* 14 (1): 79-92.

FENG Q., FANG N., ZHANG Z. & HUANG J. 1998. — Uppermost Permian Radiolaria from southwestern China. *Journal of China University of Geosciences* 9 (3): 238-245.

FENG Q., GU S., JIANG M. & JIN Y. 2004a. — Two new radiolarian genera from the uppermost Permian of southern China. *Revue de Micropaléontologie* 47 (3): 135-143. https://doi.org/10.1016/S0035-1598(04)00033-9

FENG Q., HELMCKE D., CHONGLAKMANI C., INGAVAT-HELMCKE R. & LIU B. 2004b. — Early Carboniferous radiolarians from northwest Thailand: palaeogeographical implications. *Palaeontology* 47 (2): 377-393. https://doi.org/10.1111/j.0031-0239.2004.00370.x

FENG Q., HE W., GU S., JIN Y. & MENG Y. 2006a. — Latest Permian Spumellaria and Entactinaria (Radiolaria) from South China. *Revue de Micropaléontologie* 49 (1): 21-43. https://doi.org/10.1016/j.revmic.2005.11.003

FENG Q., HE W., ZHANG S. & GU S. 2006b. — Taxonomy of order Latentifistularia (Radiolaria) from the Latest Permian in Southern Guangxi, China. *Journal of Paleontology* 80 (5): 826-848. https://doi.org/10.1666/0022-3360(2006)80[826:TOOLRF]2.0.CO;2

FENG Q., MENG Y., HE W. & GU S. 2006c. — A new genus of Entactiniidae (Radiolaria) from the Upper Permian of South China. *Eclogae geologicae Helvetiae* 99 (supplement 1): S67-S78. https://doi.org/10.1007/s00015-006-0608-z

FENG Q., GU S., HE W. & JIN Y. 2007. — Latest Permian Entactinaria (Radiolaria) from southern Guangxi, China. *Journal of Micropalaeontology* 26 (1): 19-40. https://doi.org/10.1144/jm.26.1.19

FENG Q., MEI Y. & CRASQUIN S. 2009. — Latest Permian Palaeolithocycliidae (Radiolaria) from South China. *Revue de Micropaléontologie* 52 (2): 141-148. https://doi.org/10.1016/j.revmic.2007.08.008

FOREMAN H. P. 1963. — Upper Devonian Radiolaria from the Huron member of the Ohio shale. *Micropaleontology* 9 (3): 267-304. https://doi.org/10.2307/1484751

FURUTANI H. 1983. — Middle Palaeozoic Palaeoscenidiidae (Radiolaria) from Mt. Yokokura, Shikoku, Japan. Part 1. *Transactions and Proceedings of the Palaeontological Society of Japan, New Series* 130: 96-116. https://doi.org/10.14825/prpsj1951.1983.130_96

FURUTANI H. 1990. — Middle Paleozoic radiolarians from Fukuji Area, Gifu Prefecture, central Japan. *Journal of Earth Sciences Nagoya University* 37: 1-56.

GOODBODY Q. H. 1986. — Wenlock Palaeoscenidiidae and Entactiniidae (Radiolaria) from the Cape Phillips Formation of the Canadian Arctic Archipelago. *Micropaleontology* 32 (2): 129-157. https://doi.org/10.2307/1485627

GOTO H., UMEDA M. & ISHIGA H. 1992. — Late Ordovician Radiolarians from the Lachlan Fold Belt, Southeastern Australia. *Memoirs of the Faculty of Science, Shimane University* 26: 145-170.

GOURMELON F. 1986. — Étude des radiolaires d'un nodule phosphaté du Carbonifère inferieur de Bareilles, Hautes-Pyrenees, France. *Geobios* 19 (2): 179-206. https://doi.org/10.1016/S0016-6995(86)80044-4

GOURMELON F. 1987. — Les Radiolaires tournaisiens des nodules phosphatés de la Montagne Noire et des Pyrénées centrales. *Biostratigraphie du Paléozoïque* 6: 1-172.
GUI B., FENG Q. & YUAN A. 2009. — Late Changhsingian (Latest Permian) radiolarians from Chaohu, Anhui. *Journal of Earth Science* 20 (5): 797-810. https://doi.org/10.1007/s12583-009-0069-1
HAO Y. & SHU D. 1987. — The oldest known well-preserved Phaeodarina (Radiolaria) from southern Shensi. *Geoscience (Beijing)* 1 (3-4): 301-310.
HE W., FENG Q., GU S. & JIN Y. 2005. — Changxingian (Upper Permian) radiolarian fauna from Meishan D Section, Changxing, Zhejiang, China, and its possible paleoecological significance. *Journal of Paleontology* 79 (2): 209-218. https://doi.org/10.1666/0022-3360(2005)079<0209:CUPRFF>2.0.CO;2
HE W., ZHANG Y., ZHANG Q., ZHANG K., YUAN A. & FENG Q. 2011. — A latest Permian radiolarian fauna from Hushan, South China, and its geological implications. *Alcheringa* 35 (4): 471-496. https://doi.org/10.1080/03115518.2010.536649
HINDE G. J. 1890. — Notes on Radiolaria from the Lower Palaeozoic rocks (Llandeilo-Caradoc) of the South of Scotland. *Annals and Magazine of Natural History, sixth series,* 6: 40-59. https://doi.org/10.1080/00222939008693993
HINDE G. J. 1899a. — On the Radiolaria in the Devonian rocks of New South Wales. *Quarterly Journal of the Geological Society of London* 55: 38-64. https://doi.org/10.1144/GSL.JGS.1899.055.01-04.06
HINDE G. J. 1899b. — On Radiolaria in chert from Chypons Farm, Mullion Parish (Cornwall). *Quarterly Journal of the Geological Society of London* 55: 214-219. https://doi.org/10.1144/GSL.JGS.1899.055.01-04.14
HINDE G. J. & FOX H. 1895. — On a well-marked horizon of radiolarian rocks in the Lower Culm Measures of Devon, Cornwall and West Somerset. *Quarterly Journal of the Geological Society of London* 51: 609-668. https://doi.org/10.1144/GSL.JGS.1895.051.01-04.45
HINZ-SCHALLREUTER I. & SCHALLREUTER R. 2003. — Radiolarians from the Sularp shale (Ordovician of Scania). *Geschiebekunde Aktuell* 19 (3): 69-85.
HOLDSWORTH B. K. 1966. — A preliminary study of the palaeontology and palaeoenvironment of some Namurian limestone 'bullions'. *The Mercian Geologist* 1 (4): 315-337.
HOLDSWORTH B. K. 1969. — Namurian Radiolaria of the genus *Ceratoikiscum* from Staffordshire and Derbyshire, England. *Micropaleontology* 15 (2): 221-229. https://doi.org/10.2307/1484921
HOLDSWORTH B. K. & JONES D. L. 1980. — Preliminary radiolarian zonation for late Devonian through Permian time. *Geology* 8 (6): 281-285. https://doi.org/10.1130/0091-7613(1980)8<281:PRZFLD>2.0.CO;2
HOLDSWORTH B. K. & MURCHEY B. L. 1988. — Paleozoic radiolarian biostratigraphy of the northern Brooks Range, Alaska, *in* GRYC G. (ed.), *Geology and Exploration of the National Petroleum Reserve in Alaska, 1974 to 1982*. United States Geological Survey, professional Paper, Report 1399: 777-797.
ISAKOVA T. N. & NAZAROV B. B. 1986. — Late Carboniferous-Early Permian stratigraphy and microfauna of the Southern Urals. *Doklady Akademii Nauk SSSR* 402: 1-183.
ISHIGA H. 1982. — Late Carboniferous and Early Permian radiolarians from the Tamba Belt, Southwest Japan. *Earth Science, Journal of the Association for the Geological Collaboration in Japan* 36 (6): 333-339.
ISHIGA H. 1983. — Morphological change in the Permian Radiolaria, *Pseudoalbaillella scalprata* in Japan. *Transactions and Proceedings of the Palaeontological Society of Japan, New Series* 129: 1-8. https://doi.org/10.14825/prpsj1951.1983.129_1
ISHIGA H. 1988. — Middle and Late Paleozoic Radiolarian Biostratigraphy of Japan. *Geological Report Shimane University* 7: 69-76. http://ir.lib.shimane-u.ac.jp/6303
ISHIGA H. 1991. — Description of a new *Follicucullus* species from southwest Japan. *Memoirs of the Faculty of Science, Shimane University* 25: 107-118.
ISHIGA H. 1992. — Middle Paleozoic radiolarians of the genus *Ceratoikiscum* from Japan, *in* ISHIZAKI K. & SAITI T. (eds), *Centenary of Japanese Micropaleontology*. Terra Scientific Publishing Company, Tokyo: 389-397.
ISHIGA H. & IMOTO N. 1980. — Some Permian radiolarians in the Tamba District, Southwest Japan. *Earth Science, Journal of the Association for the Geological Collaboration in Japan* 34 (6): 333-345.
ISHIGA H., KITO T. & IMOTO N. 1982a. — Late Permian radiolarian assemblages in the Tamba District and an adjacent area, Southwest Japan. *Earth Science, Journal of the Association for the Geological Collaboration in Japan* 36 (1): 10-22.
ISHIGA H., KITO T. & IMOTO N. 1982b. — Middle Permian radiolarian assemblages in the Tamba District and an adjacent area, Southwest Japan. *Earth Science, Journal of the Association for the Geological Collaboration in Japan* 36 (5): 272-281.
ISHIGA H., IMOTO N., YOSHIDA M. & TANABE T. 1984. — Early Permian radiolarians from the Tamba Belt, Southwest Japan. *Earth Science, Journal of the Association for the Geological Collaboration in Japan* 38 (1): 44-54.
ISHIGA H., WATASE H. & NAKA T. 1986. — Permian radiolarians from Nishiki Group in Sangun-Chugoku Belt, Southwest Japan. *Earth Science, Journal of the Association for the Geological Collaboration in Japan* 40 (2): 124-136.
ISHIGA H., LEITCH E. C., NAKA T., WATANABE T. & IWASAKI M. 1987. — Late Devonian Paleoscenidiidae from the Hastings Block, New England Fold Belt, N.S.W., Australia. *Earth Science, Journal of the Association for the Geological Collaboration in Japan* 41 (6): 297-302.
JIN Y., FENG Q., MENG Y., HE W. & GU S. 2007. — Albaillellidae (Radiolaria) from the latest Permian in southern Guangxi, China. *Journal of Paleontology* 81 (1): 9-18. https://doi.org/10.1666/0022-3360(2007)81[9:ARFTLP]2.0.CO;2
JONES M. K. & NOBLE P. J. 2006. — Sheinwoodian (uppermost Lower Silurian) Radiolaria from the Cape Phillips Formation, Nunavut, Canada. *Micropaleontology* 52 (4): 289-315. https://doi.org/10.2113/gsmicropal.52.4.289
KHABAKOV A. V. 1932. — O nakhodke fauny radiolyarii v kremnistykh slantsakh i yashmakh paleozoya Kavkazskogo khrebta i ee paleogeograficheskom znachenii [On the discovery of radiolarians in the Paleozoic cherts and jaspers of the Caucasus Range and its paleogeographic significance]. *Bulletin of the United Geological and Prospecting Service of USSR* 51 (12): 219-225.
KIESSLING W. & TRAGELEHN H. 1994. — Devonian Radiolarian Faunas of Conodont-dated localities in the Frankenwald (Northern Bavaria, Germany). *Abhandlungen der geologisches Bundesanstalt in Wien* 50: 219-255.
KOZUR H. 1980. — Ruzhencevispongidae, eine neue Spumellaria Familie aus dem oberen Kungurian (Leonardian) und Sakmarian des Vorurals. *Geologisch Paläontologische Mitteilungen Innsbruck* 10 (6): 235-242.
KOZUR H. 1981. — Albaillellidae (Radiolaria) aus dem Unterperm des Vorurals. *Geologisch Paläontologische Mitteilungen Innsbruck* 10 (8): 263-274.
KOZUR H. 1993. — Upper Permian Radiolarians from the Sosio Valley Area, Western Sicily (Italy) and from the Uppermost Lamar Limestone of West Texas. *Jahrbuch der geologischen Bundesanstalt, Wien* 136 (1): 99-123.
KOZUR H. 1997. — First discovery of Muellerisphaerida (*inc. sedis*) and *Eoalbaillella* (Radiolaria) in Turkey and the age of the siliciclastic sequence (clastic series) in Karaburun Peninsula. *Freiberger Forschungshefte. C, Geowissenschaften Geologie* 4: 33-59.
KOZUR H. & MOSTLER H. 1989. — Radiolarien und schwammskleren aus dem Unterperm des Vorurals. *Geologisch Paläontologische Mitteilungen Innsbruck, Sonderband* 2: 147-275.
KOZUR H. W., MOSTLER H. & REPETSKI J. E. 1996. — Well-preserved Tremadocian primitive Radiolaria from the Windfall Formation of the Antelope Range, Eureka County, Nevada, U.S.A. *Geologisch Paläontologische Mitteilungen Innsbruck* 21: 245-271.

KURIHARA T. 2007. — Uppermost Silurian to Lower Devonian radiolarians from the Hitoegane area of the Hida-Gaien terrane, central Japan. *Micropaleontology* 53 (3): 221-237. https://doi.org/10.2113/gsmicropal.53.3.221

KURIHARA T. & SASHIDA K. 2000. — Taxonomy of Late Silurian to Middle Devonian radiolarians from the Kuzuryu Lake district of the Hida Gaien Belt, Fukui Prefecture, central Japan. *Micropaleontology* 46 (1): 51-71. http://www.jstor.org/stable/1486025

KUWAHARA K. 1999. — Phylogenetic Lineage of Late Permian *Albaillella* (Albaillellaria, Radiolaria). *Journal of Geosciences, Osaka City University* 42 (6): 85-101.

KUWAHARA K. & SAKAMOTO M. 1992. — Late Permian *Albaillella* (Radiolaria) from a bedded chert section in the Gujo-hachiman area of the Mino Belt, central Japan: preliminary report on morphometry and cluster analysis. *Journal of Geosciences, Osaka City University* 35 (3): 33-52

LI H. 1991. — First discovery of Middle Silurian Radiolaria fossils in Xinjiang. *Scientia Geologica Sinica* 1: 75.

LI H. 1994. — Middle Silurian radiolarians from Keerhada, Xinjiang. *Acta Micropalaeontologica Sinica* 11 (2): 259-272.

LI H. 1995. — New genera and species of middle Ordovician Nassellaria and Albaillellaria from Baijingsi, Quilian Mountains, China. *Scientia Geologica Sinica* 4 (3): 331-346.

LI Y. X. & WANG Y. J. 1991. — Upper Devonian (Frasnian) radiolarian fauna from the Liukiang Formation, eastern and southeastern Guangxi. *Acta Micropalaeontologica Sinica* 8 (4): 395-404.

LING H. Y. & FORSYTHE R. D. 1987. — Late Paleozoic pseudoalbaillellid radiolarians from southernmost Chile and their geological significance, *in* MCKENZIE G. D. (ed.), *Gonwanda Six; Structure, Tectonics, and Geophysics*. American Geophysical Union (Geophysical Monograph vol. 40): 253-260. https://doi.org/10.1029/GM040p0221

LIU H. 1992. — Fossil radiolarians from the turbidite of the Middle Carboniferous east Tianshan Mountain, Xinjiang. *Journal of Northwest University, Natural Science Education* 22: 123-130, 169-170.

LIU Y. & HAO S. 2006. — Evolutionary significance of pylentonemid radiolarians and their Late Devonian species from southwestern Tianshan, China. *Acta Geologica Sinica* 80 (5): 647-655.

LUO H., AITCHISON J. C. & WANG Y. J. 2002. — Devonian (upper Emsian-lower Givetian) radiolarians from the Tanhe Formation, Nanning, Guangxi, Southwest China. *Micropaleontology* 48 (supplement 1): 113-127. http://www.jstor.org/stable/1486015

MACDONALD E. W. 1998. — Llandovery Secuicollactinae and Rotasphaeridae (Radiolaria) from the Cape Phillips Formation, Cornwallis Island, Arctic Canada. *Journal of Paleontology* 72 (4): 585-604. https://doi.org/10.1017/S0022336000040324

MACDONALD E. W. 1999. — *Insolitignum* n.gen. and *Palaeoephippium* Goodbody 1986 (Radiolaria) from the Lower Silurian of the Cape Phillips Formation, Arctic Canada. *Canadian Journal of Earth Science* 36 (12): 2051-2057. https://doi.org/10.1139/e99-101

MACDONALD E. W. 2004. — Palaeoscenidiidae (Radiolaria) from the Lower Silurian ff the Cape Phillips Formation, Cornwallis Island, Nunavut, Canada. *Journal of Paleontology* 78 (2): 257-274. https://doi.org/10.1666/0022-3360(2004)078<0257:PRFTLS>2.0.CO;2

MACDONALD E. W. 2006. — Haplotaeniatumidae and Inaniguttidae (Radiolaria) from the Lower Silurian of the Cape Phillips Formation, Cornwallis Island, Nunavut, Canada. *Journal of Paleontology* 80 (1): 19-37. https://doi.org/10.1666/0022-3360(2006)080[0019:HAIRFT]2.0.CO;2

MALDONADO A. L. & NOBLE P. J. 2010. — Radiolarians from the upper Guadalupian (Middle Permian) Reef Trail Member of the Bell Canyon Formation, West Texas and their biostratigraphic implications. *Micropaleontology* 56 (1-2): 69-115. https://www.jstor.org/stable/40607077

MALETZ J. 2007. — The Early Ordovician *Beothuka terranova* (Radiolaria) faunal assemblage in western Newfoundland. *Palaeontologische Zeitschrift* 81 (1): 71-82. https://doi.org/10.1007/BF02988380

MALETZ J. & BRUTON D. L. 2005. — The *Beothuka terranova* (Radiolaria) assemblage and its importance for the understanding of early Ordovician radiolarian evolution. *Geological Magazine* 142 (6): 711-721. https://doi.org/10.1017/S0016756805001391

MALETZ J. & BRUTON D. L. 2007. — Lower Ordovician (Chewtonian to Castlemainian) radiolarians of Spitsbergen. *Journal of Systematic Palaeontology* 5 (3): 245-288. https://doi.org/10.1017/S1477201907002039

MALETZ J. & BRUTON D. L. 2008. — The Middle Ordovician *Proventocitum procerulum* radiolarian assemblage of Spitsbergen and its biostratigraphic correlation. *Palaeontology* 51 (5): 1181-1200. https://doi.org/10.1111/j.1475-4983.2008.00803.x

NAZAROV B. B. 1973a. — First occurrences of Radiolaria of the Entactiniidae and Ceratoikiscidae families in the upper Devonian of the Southern Urals. *Doklady Akademii Nauk SSSR* 210 (3): 696-699.

NAZAROV B. B. 1973b. — Radiolaria from the lower horizons of the Cambrian of Bazhenev Ridge, *in* Problems of paleontology and biostratigraphy of the Lower Cambrian of Siberia and the Far Eastern USSR. *Transactions of the Institute of Geology and Geophysics, Siberian Branch of the Academy of Sciences* 49: 5-13.

NAZAROV B. B. 1974a. — Albaillellidae and Paleoscenidiidae from the Upper Devonian deposits of the Southern Urals, *in* ZHAMOIDA A. I. (ed.), *Biostratigraphy and Paleontology of the Lower Cambrian of Europe and Middle Asia*. Publication of the All-Union Institute of Geology, new series, Leningrad, vol. 226: 41-47.

NAZAROV B. B. 1974b. — Problematic siliceous formations from the lower Paleozoic of Kazakhstan. *in* ZHAMOIDA A. I. (ed.), *Biostratigraphy and Paleontology of the Lower Cambrian of Europe and Middle Asia*. Publication of the All-Union Institute of Geology, new series, Leningrad, vol. 226: 110-112.

NAZAROV B. B. 1975. — Lower and Middle Paleozoic radiolarians of Kazakhstan (methods of investigation, systematics and stratigraphic significance), *in* RAABEN M. E. (ed.), Transactions of the Academy of Sciences of the USSR, Geological Institute. Izdatelstvo Nauka, Moscow, vol. 275: 1-203.

NAZAROV B. B. 1977. — A new radiolarian family from the Ordovician of Kazakhstan. *Paleontological Journal* 11 (2): 165-171.

NAZAROV B. B. 1980. — Class Sarcodina; subclass Radiolaria, *in* APOLLONOV M. K., BANDALETOV S. M. & NIKITIN I. F. (eds), *The Ordovician-Silurian Boundary in Kazakhstan*. Nauka, Alma-Ata, Kazakhstan, USSR: 22-24.

NAZAROV B. B. 1988. — Paleozoic radiolaria, *in* ZHAMOIDA A. I. (ed.), *Practical Manual of Microfauna of the USSR*. Nedra, Leningrad, vol. 2, 232 p.

NAZAROV B. B. & SHKOLNIK E. L. 1974. — On the question of the age of the siliceous-volcanogenic sequences in the Ud-Selemzhin interfluve, *in* SYSSOIEV V. (ed.), *Biostratigraphy and Paleontology of the Lower Cambrian of Europe and Central Asia*. Nauka, Moscow: 104-109.

NAZAROV B. B. & KRUYCHECK S. A. 1977. — Upper Devonian Radiolaria of the Russian Platform. *Transaction of Doklady of the Russian Academy of Science: Earth Science Sections* 6 (237): 1445-1448.

NAZAROV B. B. & RUDENKO V. S. 1981. — Some radiolarians with bilateral symmetry of the upper Paleozoic of the Southern Urals. *Systematics and Morphology of Microorganisms: Problems of Micropaleontology* 24: 129-139.

NAZAROV B. B. & NOLVAK J. 1983. — Radiolarians from the Upper Ordovician of Estonia. *Izvestiya Akademii Nauk Estonskoy SSR, Geologiya* 32 (1): 1-8.

NAZAROV B. B. & ORMISTON A. 1983a. — Upper Devonian (Frasnian) radiolarian fauna from the Gogo Formation, Western Australia. *Micropaleontology* 29 (4): 454-466. https://doi.org/10.2307/1485519

NAZAROV B. B. & ORMISTON A. 1983b. — A new superfamily of stauraxon polycystine Radiolaria from the Late Paleozoic of the Soviet Union and North America. *Senckenbergiana Lethaea* 64 (2-4): 363-379.
NAZAROV B. B. & ORMISTON A. 1984. — Tentative system of Paleozoic Radiolaria, *in* PETRUSHEVSKAYA M. G. & STEPANJANTS S. D. (eds), *Morphology, Ecology and Evolution of Radiolarians. Material from the IV Symposium of European Radiolarists EURORAD IV*. Academiya Nauk SSSR, Zoological Institute, Leningrad, USSR: 64-87.
NAZAROV B. B. & ORMISTON A. R. 1985. — Radiolaria from the Late Paleozoic of the Southern Urals, USSR and West Texas, USA. *Micropaleontology* 31 (1): 1-54. https://doi.org/10.2307/1485579
NAZAROV B. B. & ORMISTON A. R. 1987. — A new Carboniferous radiolarian genus and its relation to the multishelled entactiniids. *Micropaleontology* 33 (1): 66-73. https://doi.org/10.2307/1485527
NAZAROV B. B. & ORMISTON A. R. 1989. — New radiolarian species from the Permian of the Southern Urals and Nevada. *Paleontological Journal* 23 (2): 10-20.
NAZAROV B. B. & ORMISTON A. R. 1990. — The biostratigraphic potential of radiolarians from the Palaeozoic, *in* CHUVASHOV B. I., ZHAMOIDA A. I. & AMON E. O. (eds), *Radiolaria in Biostratigraphy: Collected Proceedings*. Ural'skoe otdelenie AN SSSR; Sverdlovsk: 3-25, 121, 125, 126.
NAZAROV B. B. & ORMISTON A. R. 1993. — New biostratigraphically important Paleozoic Radiolaria of Eurasia and North America, *in* BLUEFORD J. R. & MURCHEY B. L. (eds), Radiolaria of Giant and Subgiant Fields in Asia. Nazarov Memorial Volume. *Micropaleontology, Special Publication* 6: 22-60.
NAZAROV B. B. & POPOV L. Y. 1976. — Radiolarians, ecardine brachiopods and organisms of uncertain systematic position from the Middle Ordovician of eastern Kazakhstan. *Paleontological Journal* 4: 407-416.
NAZAROV B. B. & POPOV L. Y. 1980. — Stratigraphy and fauna of the siliceous-carbonate sequence of the Ordovician of Kazakhstan (Radiolaria and inarticulate brachiopods). *Transactions of the Geological Institute of the Soviet Akademy of Sciences* 331: 1-192.
NAZAROV B. B., POPOV L. Y. & APOLLONOV M. 1975. — Lower Paleozoic Radiolaria in Kazakhstan. *Izvestija Akademii Nauk SSSR, serija geologičeskaja* 10: 96-105.
NAZAROV B. B., POPOV L. Y. & APOLLONOV M. 1977. — Lower Paleozoic radiolarians of Kazakhstan. *International Geology Review* 19 (8): 913-920. https://doi.org/10.1080/00206817709471089
NAZAROV B. B., TKACHENKO V. I. & SHULGINA V. S. 1981. — Radiolaria and age of terrigenous siliceous beds of the Kolyma region. *Izvestija Akademii Nauk SSSR, serija geologičeskaja* 10: 79-89.
NAZAROV B. B., COCKBAIN A. E. & PLAYFORD P. E. 1982. — Late Devonian Radiolaria from the Gogo Formation, Canning Basin, Western Australia. *Alcheringa* 6 (3): 161-173. https://doi.org/10.1080/03115518208565408
NESTELL G. P. & NESTELL M. K. 2010. — Late Capitanian (latest Guadalupian, Middle Permian) radiolarians from the Apache Mountains, West Texas. *Micropaleontology* 56 (1-2): 7-68. https://www.jstor.org/stable/40607076
NESTELL G. P., POPE J. P. & NESTELL M. K. 2012. — Middle Pennsylvanian (Desmoinesian) Radiolaria from the Midcontinent of North America. *Micropaleontology* 58 (3): 217-257. https://www.jstor.org/stable/23250632
NISHIMURA K. & ISHIGA H. 1987. — Radiolarian biostratigraphy of the Maizuru Group in Yanahara area, Southwest Japan. *Memoirs of the Faculty of Science, Shimane University* 21: 169-188.
NITECKI M. H. 1963. — Catalogue of type specimens in the Walker Museum of Paleontology and Chicago Natural History Museum – Radiolaria and Eurypterida. *Fieldiana: Geology (New Series)* 13 (3): 163-183. http://biodiversitylibrary.org/page/4260689
NOBLE P. J. 1994. — Silurian Radiolarian Zonation for the Caballos Novaculite, Marathon Uplift, West Texas. *Bulletins of American Paleontology* 106 (2): 1-55. http://biodiversitylibrary.org/page/10684913
NOBLE P. & RENNE P. 1990. — Paleoenvironmental and biostratigraphic significance of siliceous microfossils of the Permo-Triassic Redding Section, Eastern Klamath Mountains, California. *Marine Micropaleontology* 15 (3-4): 379-391. https://doi.org/10.1016/0377-8398(90)90021-D
NOBLE P. J. & MALETZ J. 2000. — Radiolaria from the Telychian (Llandovery, Early Silurian) of Dalarna, Sweden. *Micropaleontology* 46 (3): 265-275. https://doi.org/10.2113/46.3.265
NOBLE P. J. & LENZ A. C. 2007. — Upper Wenlock Ceratoikiscidae (Radiolaria) from the Cape Phillips Formation, Arctic Canada. *Journal of Paleontology* 81 (5): 1044-1052. https://doi.org/10.1666/pleo05-053.1
NOBLE P. J. & WEBBY B. D. 2009. — Katian (Ordovician) radiolarians from the Malongulli Formation, New South Wales, Australia, a re-examination. *Journal of Paleontology* 83 (4): 548-561. https://doi.org/10.1666/08-179R.1
NOBLE P. J. & JIN Y. 2010. — Radiolarians from the Lamar Limestone, Guadalupe Mountains,West Texas. *Micropaleontology* 56 (1-2): 117-147. https://www.jstor.org/stable/40607078
NOBLE P. J., KETNER K. B. & MCCLELLAN W. 1997. — Early Silurian Radiolaria from Northern Nevada, USA. *Marine Micropaleontology* 30 (1-3): 215-223. https://doi.org/10.1016/S0377-8398(96)00026-6
NOBLE P. J., TEKIN U. K., GEDIK I. & SUKRU P. 2008. — Middle to Upper Tournasian Radiolaria of the Baltalimani Formation, Istanbul, Turkey. *Journal of Paleontology* 82 (1): 37-56. https://doi.org/10.1666/06-046.1
O'DOGHERTY L. 2009. — Inventory of Mesozoic radiolarian species (1867-2008). *Geodiversitas* 31 (2): 371-481. https://doi.org/10.5252/g2009n2a6
OBUT O. T. & IWATA K. 2000. — Lower Cambrian Radiolaria from the Gorny Altai (southern West Siberia). *Novosti Paleontologii i Stratigrafii* 2-3: 33-37.
OBUT O. T. & SHCHERBANENKO T. A. 2008. — Late Devonian radiolarians from the Rudny Altai (SW Siberia). *Bulletin of Geosciences* 83 (4): 371-382. https://doi.org/10.3140/bull.geosci.2008.04.371
ORMISTON A. R. & LANE H. R. 1976. — A unique radiolarian fauna from the Sycamore Limestone (Mississippian) and its biostratigraphic significance. *Palaeontographica. Abteilung A: Paleozoologie-Stratigraphie* 154: 158-180.
ORMISTON A. R. & BABCOCK L. 1979. — *Follicucullus*, new radiolarian genus from the Guadalupian (Permian) Lamar limestone of the Delaware Basin. *Journal of Paleontology* 53 (2): 328-334. http://www.jstor.org/stable/1303874
PARK I.-Y. & WON M.-Z. 2012. — Tropical radiolarian assemblages from the Lower Carboniferous Delle Phosphatic Member of the Woodman Formation of Utah, USA. *Journal of the Paleontological Society of Korea* 28 (1-2): 29-101.
PICKETT J. & JELL P. A. 1983. — Middle Cambrian Sphinctozoa (Porifera) from New South Wales. *Memoirs of the Association of Australian Palaeontologists* 1: 85-92.
POUILLE L., DANELIAN T., POUR M. G. & POPOV L. E. 2013. — New and Revised Inaniguttid Radiolaria and Associated Trilobites from the Upper Darriwilian (Ordovician) Shundy Formation of Kazakhstan. *Journal of Paleontology* 87 (6): 1143-1159. https://doi.org/10.1666/12-106
POUILLE L., DANELIAN T. & POPOV L. E. 2014. — A diverse Upper Darriwilian radiolarian assemblage from the Shundy Formation of Kazakhstan: insights into late Middle Ordovician radiolarian biodiversity. *Journal of Micropalaeontology* 33 (2): 149-163. https://doi.org/10.1144/jmpaleo2014-008
PULFREY W. 1932. — The occurrence of radiolarian-bearing nodules at the base of the Edale Shales, near Calver Sough, North Derbyshire. *Proceedings of the Geologists' Association* 43 (2): 192-198. https://doi.org/10.1016/S0016-7878(32)80027-1
RENZ G. W. 1990. — Late Ordovician (Caradocian) radiolarians from Nevada. *Micropaleontology* 36 (4): 367-377. https://doi.org/10.2307/1485476

ROTHPLETZ A. 1880. — Radiolarien, Diatomaceen und Spharosomatiten im silurischen Kieselschiefer von Langenstriegis Sachsen. *Zeitschrift der deutschen geologischen Gesellschaft* 32: 447-467.

RUDENKO V. S. & PANASENKO E. S. 1990a. — A new findings of the Upper Permian radiolarians in Primorye region, *in* ZAKHAROV Y. D., BELYAEVA G. V. & NIKITINA A. P. (eds), *New Data on Palaeozoic and Mesozoic Biostratigraphy of the South Far East (IUGS Project 272)*. Far Eastern Branch of the USSR Academy of Sciences, Vladivostok: 117-124.

RUDENKO V. S. & PANASENKO E. S. 1990b. — Permian Albaillellaria (Radiolaria) of the Pantovian sequence in Primorye, *in* ZAKHAROV Y. D., BELYAEVA G. V. & NIKITINA A. P. (eds), *New Data on Palaeozoic and Mesozoic Biostratigraphy of the South Far East (IUGS Project 272).* Far Eastern Branch of the USSR Academy of Sciences, Vladivostok: 181-193.

RUEDEMANN R. & WILSON T. Y. 1936. — Eastern New York Ordovician cherts. *Geological Society of America, Bulletin* 74 (10): 1535-1586. https://doi.org/10.1130/GSAB-47-1535

RÜST D. 1892. — Beiträge zur Kenntniss der fossilen Radiolarien aus Gesteinen der Trias und der palaeozoischen Schichten. *Palaeontographica* 38: 107-179. http://biodiversitylibrary.org/page/33193870

SASHIDA K. & TONISHI K. 1985. — Permian radiolarians from the Kanto Mountains, central Japan; some Upper Permian Spumellaria from Itsukaichi, western part of Tokyo Prefecture. *Science Reports of the Institute of Geoscience, University of Tsukuba, Section B: Geological Sciences* 6: 1-19.

SASHIDA K. & TONISHI K. 1986. — Upper Permian stauraxon polycystine Radiolaria from Itsukaichi, western part of Tokyo Prefecture. *Science Reports of the Institute of Geoscience, University of Tsukuba, Section B: Geological Sciences* 7: 1-13.

SASHIDA K. & TONISHI K. 1988. — Additional note on Upper Permian radiolarian fauna from Itsukaichi, western part of Tokyo Prefecture, central Japan. *Transactions and Proceedings of the Palaeontological Society of Japan, New Series* 151: 523-542. https://doi.org/10.14825/prpsj1951.1988.151_523

SASHIDA K. & TONISHI K. 1991. — An Upper Permian coiled radiolarian from Itsukaichi, central Japan. *Micropaleontology* 37 (1): 86-94. https://doi.org/10.2307/1485747

SASHIDA K., ADACHI S., IGO H., NAKORNSRI N. & AMPORNMAHA A. 1997. — Middle to Upper Permian and Middle Triassic radiolarians from Eastern Thailand. *Science Reports of the Institute of Geoscience, University of Tsukuba, Section B: Geological Sciences* 18: 1-17.

SASHIDA K., IGO H., ADACHI S., UENO K., KAJIWARA Y., NAKORNSRI N. & SARDSUD A. 2000a. — Late Permian to Middle Triassic radiolarian faunas from Northern Thailand. *Journal of Paleontology* 74 (5): 789-811. https://doi.org/10.1017/S0022336000033011

SASHIDA K., NAKORNSRI N., UENO K. & SARDSUD A. 2000b. — Carboniferous and Triassic radiolarian faunas from the Saba Yoi area, southernmost part of peninsular Thailand and their paleogeographic significance. *Science Reports of the Institute of Geoscience, University of Tsukuba, Section B: Geological Sciences* 21: 71-99.

SASHIDA K., SALYAPONGSE S. & NAKORNSRI N. 2000c. — Latest permian radiolarian fauna from Klaeng, eastern Thailand. *Micropaleontology* 46 (3): 245-263. https://doi.org/10.2113/46.3.245

SCHWARTZAPFEL J. A. & HOLDSWORTH B. K. 1996. — Upper Devonian and Mississippian radiolarian zonation and biostratigraphy of the Woodford, Sycamore, Caney and Goddard Formations, Oklahoma. *Cushman Foundation for Foraminiferal Research, Special Publication* 33: 1-275.

SEO E.-H. & WON M.-Z. 2009. —Review of the genus *Polyentactinia* and the family Polyentactiniidae. *Micropaleontology* 55 (1): 61-74. https://www.jstor.org/stable/20627972

SHANG Q.-H., CARIDROIT M. & WANG Y. J. 2001. — Radiolarians from the uppermost Permian Changhsingiang of southern Guangxi. *Acta Micropalaeontologica Sinica* 18 (3): 229-240.

SHENG J. Z. & WANG Y. J. 1982. — Fossil Radiolaria of the Middle Devonian of Qiziqiao Formation, Xintian, Hunan. *Acta Palaeontologica Sinica* 21 (1): 58-66.

SHENG J. Z. & WANG Y. J. 1985. — Fossil Radiolaria from Kufeng Formation at Longtan, Nanjing. *Acta Palaeontologica Sinica* 24 (2): 171-183.

SHU D. & CHEN L. 1989. — Discovery of Early Cambrian Radiolaria and its significance. *Science in China, Series B: Chemistry* 32 (8): 986-994.

SIVETER D. J., AITCHISON J. C., SIVETER D. J. & SUTTON M. D. 2007. — The Radiolaria of the Herefordshire Konservat-Lagerstätte (Silurian), England. *Journal of Micropalaeontology* 26 (1): 86-95. https://doi.org/10.1144/jm.26.1.87

SPILLER F. C. P. 2002. — Radiolarian biostratigraphy of peninsular Malaysia and implications for regional palaeotectonics and palaeogeography. *Palaeontographica. Abteilung A: Paleozoologie-Stratigraphie* 266 (1-3): 1-91.

STRATFORD J. M. C. & AITCHISON J. C. 1997. — Lower to Middle Devonian radiolarian assemblages from the Gamilaroi Terrane, Glenrock Station, NSW, Australia. *Marine Micropaleontology* 30 (1-3): 225-250. https://doi.org/10.1016/S0377-8398(96)00027-8

TAKEMURA A. & NAKASEKO K. 1981. — A new Permian radiolarian genus from the Tamba Belt, Southwest Japan. *Transactions and Proceedings of the Palaeontological Society of Japan, New Series* 124: 208-214. https://doi.org/10.14825/prpsj1951.1981.124_208

TAKEMURA A., MORIMOTO T., AITA Y., HORI R. S., HIGUCHI Y., SPÖRLI K. B., CAMPBELL H. J., KODAMA K. & SAKAI T. 1999. — Permian Albaillellaria (Radiolaria) from a limestone lens at the Arrow Rocks in the Waipapa Terrane (Northland, New Zealand). *Geodiversitas* 21 (4): 751-765.

TERS M. & DEFLANDRE G. 1966. — Sur l'âge cambro-silurien des terrains anciens de la Vendée Littorale (ex-Briovérien). *Comptes Rendus hebdomadaires des Séances de l'Académie des Sciences (Paris), Série D: Sciences naturelles* 262 (3): 339-342. http://gallica.bnf.fr/ark:/12148/bpt6k5489696x

TETARD M., NOBLE P. J., DANELIAN T., MONNET C. & LENZ A. C. 2015. — A new Gorstian radiolarian fauna from the upper Silurian of the Cape Phillips Formation, Cornwallis and Bathurst islands, Canadian Arctic. *Canadian Journal of Earth Sciences* 52 (10): 863-879. https://doi.org/10.1139/cjes-2015-0028

UMEDA M. 1997. — Late Silurian and Early Devonian radiolarians from the Konomori area in the Kurosegawa Terrane, southwest Japan. *Earth Science, Journal of the Association for the Geological Collaboration in Japan* 51: 413-432.

UMEDA M. 1998a. — Early to Middle Devonian Ceratoikiscidae (Radiolaria) from the Yokokurayama Group in the Kurosegawa Terrane, Southwest Japan. *Paleontological Research* 2 (2): 96-107. https://doi.org/10.2517/prpsj.2.96

UMEDA M. 1998b. — Some Late Silurian characteristic radiolarians from the Yokokurayama Group in the Kurosegawa Terrane, southwest Japan. *Earth Science, Journal of the Association for the Geological Collaboration in Japan* 52 (3): 203-209.

UMEDA M. & SUZUKI Y. 2005. — Aeronian (Llandovery, Early Silurian) Radiolarians from the Kallholn Formation in Siljan district, Sweden. *Micropaleontology* 51 (1): 83-92. https://doi.org/10.2113/51.1.83

VISHNEVSKAYA V. S. 1998. — The domanikoid facies of the Russian platform and basin paleogeography, *in* CRASQUIN-SOLEAU S. & BARRIER É. (eds), *Peri-Tethys Memoir 3: Stratigraphy and Evolution of Peri-Tethyan Platforms*. Muséum national d'Histoire naturelle, Paris (Mémoires du Muséum national d'Histoire naturelle; 177): 45-69.

WAKAMATSU H., SUGIYAMA K. & FURUTANI H. 1990. — Silurian and Devonian radiolarians from the Kurosegawa Tectonic Zone, southwest Japan. *Journal of Earth Sciences Nagoya University* 37: 157-192.

WANG N. W. 1989. — Micropaleontological study of Lower Palaeozoic siliceous sequences of the Yangtze Platform and Eastern

Qinling Range. *Journal of Southeast Asian Earth Sciences* 3 (1-4): 141-161. https://doi.org/10.1016/0743-9547(89)90018-4

WANG R. J. 1993a. — Fossil Radiolaria from Kufeng formation of Chaohu, Anhui. *Acta Palaeontologica Sinica* 32 (4): 442-457.

WANG R. J. 1993b. — Morphological change of the *Ruzhencevispongus uralicus* in Gufeng Formation (Lower Permian) from Jiangsu and Anhui provinces. *Shanghai Geology* 4: 5-12.

WANG R. J. 1995. — Radiolarian fauna from Gufeng Formation (Lower Permian) in Hushan area of Nanjing, Jiangsu Province. *Scientia Geologica Sinica* 30 (2): 139-148.

WANG Y. J. 1993c. — Middle Ordovician radiolarians from the Pingliang Formation of Gansu Province, China. *Micropaleontology, Special Publication* 6: 98-114.

WANG Y. J.1997. — An Upper Devonian (Famennian) radiolarian fauna from carbonate rocks, northern Xinjiang. *Acta Micropalaeontologica Sinica* 14 (2): 149-160.

WANG Y. J. & SHANG Q. 2001. — Discovery of the *Neoalbaillella* radiolarian fauna in the Shaiwa Group of Ziyun District, Guizhou. *Acta Micropalaeontologica Sinica* 18 (2): 111-121.

WANG Y. J. CHENG Y. N. & YANG Q. 1994. — Biostratigraphy and systematics of Permian Radiolarians in China, *in* YUGAN J., UTTING J. & WARDLAW B. R. (eds), Permian Stratigraphy, Environments and Resources. *Palaeoworld Special Issue* 4: 172-202.

WANG Y. J., FANG Z., YANG Q., ZHOU Z., CHENG Y., DUAN Y. & XIAO Y. 2000. — Middle-Late Devonian strata with cherty facies and radiolarian faunas in western Yunnan, China. *Acta Micropalaeontologica Sinica* 17 (3): 235-254.

WANG Y. J., AITCHISON J. C. & LUO H. 2003. — Devonian radiolarian faunas from south China. *Micropaleontology* 49 (2): 127-145. https://doi.org/10.2113/49.2.127

WANG Y. J., CHENG J. F. & ZHANG Y. D. 2008. — New radiolarian genera and species of Heituao Formation (Ordovician) in the Kuruktag Region, Xinjiang. *Acta Palaeontologica Sinica* 47 (4): 393-404.

WANG Y. J., CHENG J. F. & ZHANG Y. D. 2010. — Fossil preservation modes and functional discussion of the basic structures of a new radiolarian genus *Gansuceratoikiscum* Wang gen. nov. *Acta Palaeontologica Sinica* 49 (4): 472-476.

WANG Y. J. & KUANG G. 1993. — Early Carboniferous radiolarians from Qinzhou, southeastern Guangxi. *Acta Micropalaeontologica Sinica* 10 (3): 275-287.

WANG Y. J. & LI J. X. 1994. — Discovery of the *Follicucullus bipartitus-F. charveti* radiolarian assemblage zone and geological significance. *Acta Micropalaeontologica Sinica* 11 (2): 201-212.

WANG Y. J. & LUO H. 2009. — Upper Devonian (Frasnian) *Helenifore robustum* Radiolarian Fauna from the Bazhai Village in Ziyun County, Guizhou Province. *Acta Micropalaeontologica Sinica* 26 (2): 129-138.

WANG Y. J., LUO H. & YANG Q. 2012. — *Late Paleozoic Radiolarians in the Qinfang Area, Southeast Guangxi.* University of Science and Technology of China Press, Anhui, 123 p.

WEBBY B. D. & BLOM W. 1986. — The first well-preserved radiolarians from the Ordovician of Australia. *Journal of Paleontology* 60 (1): 145-157. https://doi.org/10.1017/S0022336000021594

WON M.-Z. 1983. — Radiolarien aus dem Unterkarbon des Rheinischen Schiefergebirges (Deutschland). *Palaeontographica. Abteilung A: Paleozoologie-Stratigraphie* 182 (4-6): 116-175.

WON M.-Z. 1990. — Lower Carboniferous radiolarians from Riescheid (Germany). *Journal of the Paleontological Society of Korea* 6 (2): 111-143.

WON M.-Z. 1991a. — Phylogenetic study of some species of genus *Albaillella* Deflandre 1952 and a radiolarian zonation in the Rheinische Schiefergebirge, West Germany. *Journal of the Paleontological Society of Korea* 7 (1): 13-25.

WON M.-Z. 1991b. — Lower Carboniferous radiolarians from siliceous boulders in Western Germany. *Journal of the Paleontological Society of Korea* 7 (1): 77-106.

WON M.-Z. 1992. — The biostratigraphic age of the transitional beds of the Riescheid section, Germany, by means of the radiolarian fauna. *Journal of Science, Pusan National University* 53: 195-210.

WON M.-Z. 1997a. — Review of family Entactiniidae (Radiolaria), and taxonomy and morphology of Entactiniidae in the late Devonian (Frasnian) Gogo Formation, Australia. *Micropaleontology* 43 (4): 333-369. https://doi.org/10.2307/1485930

WON M.-Z. 1997b. — The proposed new radiolarian subfamily Retentactiniinae (Entactiniidae) from the late Devonian (Frasnian) Gogo Formation, Australia. *Micropaleontology* 43 (4): 371-418. https://doi.org/10.2307/1485931

WON M.-Z. 1998. — A Tournaisian (Lower Carboniferous) radiolarian zonation and radiolarians of the *A. pseudoparadoxa* zone from Oese (Rheinische Schiefergebirge), Germany. *Journal of the Korean Earth Science Society* 19 (2): 216-259.

WON M.-Z. & BELOW R. 1999. — Cambrian Radiolaria from the Georgina Basin, Queensland, Australia. *Micropaleontology* 45 (4): 325-363. https://doi.org/10.2307/1486119

WON M.-Z., BLODGETT R. B. & NESTOR V. 2002. — Llandoverian (Early Silurian) radiolarians from the Road River Formation of east-central Alaska and thenew family Haplotaeniatumidae. *Journal of Paleontology* 76 (6): 941-964. https://doi.org/10.1017/S0022336000057796

WON M.-Z. & IAMS W. J. 2002. — Late Cambrian radiolarian faunas and biostratigraphy of the Cow Head Group, western Newfoundland. *Journal of Paleontology* 76 (1): 1-33. https://doi.org/10.1017/S0022336000017315

WON M.-Z. & SEO E.-H. 2010. — Lower Carboniferous radiolarian biozones and faunas from Bergishes land, Germany. *Journal of the Palaeontological Society of Korea* 26 (2): 193-269.

WON M.-Z. & IAMS W. J. 2011. — Earliest Arenig Radiolarians from the Cow Head Group, Western Newfoundland. *Journal of Paleontology* 85 (1): 156-177. https://doi.org/10.1666/10-102.1

WON M.-Z. & IAMS W. J. 2013. — Early Ordovician (early Arenig) radiolarians from the Cow Head Group and review of the Little Port Complex fauna, Western Newfoundland. *Palaeoworld* 22 (1-2): 10-31. https://doi.org/10.1016/j.palwor.2012.11.001

WON M.-Z. & IAMS W. J. 2015a. — Early/Middle Arenig (Late Floian) Radiolarian Faunal Assemblages from Cow Head Group, Western Newfoundland. *Palaeontographica Abteilung A* 304 (1-6): 1-63.

WON M.-Z. & IAMS W. J. 2015b. — Review of the *Beothuka terranova* assemblage and characteristics of the middle Arenig (Ordovician, latest Floian) radiolarian assemblage from the Cow Head Group, Newfoundland. *Neues Jahrbuch für Geologie und Paläontologie-Abhandlungen* 278 (1): 1-21. https://doi.org/10.1127/njgpa/2015/0513

WON M.-Z., IAMS W. J. & REED K. 2005. — Earliest Ordovician (Early to Middle Tremadocian) radiolarian faunas of the Cow Head Group, Western Newfoundland. *Journal of Paleontology* 79 (3): 433-459. https://doi.org/10.1666/0022-3360(2005)079<0433:EOETMT>2.0.CO;2

WON M.-Z., IAMS W. J. & REED K. 2007. — Late Tremadocian Radiolarian Faunas and Biostratigraphy of the Cow Head Group, Western Newfoundland, Canada. *Journal of the Korean Earth Science Society* 28 (4): 497-540. https://doi.org/10.5467/JKESS.2007.28.4.497

WONGANAN N. & CARIDROIT M. 2005. — Middle and Upper Devonian radiolarian faunas from Chiang Dao area, Chiang Mai province, northern Thailand. *Micropaleontology* 51 (1): 39-57. https://doi.org/10.2113/51.1.39

WU H. R. & LI H. S. 1989. — Carboniferous and Permian Radiolaria in the Menglian area, Western Yunnan. *Acta Micropalaeontologica Sinica* 6 (4): 337-343.

WU J., FENG Q., GUI B. & LIU G. 2010. — Some New Radiolarian Species and Genus from Upper Permian in Guangxi Province, South China. *Journal of Paleontology* 84 (5): 879-894. https://doi.org/10.1666/09-057.1

XIAN W. & ZHANG N. 1998. — Early to Middle Permian radiolarians from the Kuhfeng Formation in southeastern Guangxi, South China. *Earth Science, Journal of the Association for the Geological Collaboration in Japan* 52 (3): 188-202.

YAO A. & KUWAHARA K. 1999. — Permian and Triassic radiolarian assemblages from the Yangzi Platform, *in* YAO A., EZAKI Y., HAO W. & WANG X. (eds), *Biotic and Geological Development of the Paleo-Tethys in China*. Peking University Press: 1-16.

ZHANG K., WU S. & LIU Y. 1992. — Radiolarians and Conodonts from the Dalong Formation at Hushan of Nanjing and their Facieological significance. *Earth Science, Journal of China University of Geosciences* 17 (3): 295-300.

ZHANG N., HENDERSON C. M., XIA W., WANG G. & SHANG H. 2010. — Conodonts and radiolarians through the Cisuralian-Guadalupian boundary from the Pingxiang and Dachongling sections, Guangxi region, South China. *Alcheringa* 34 (2): 135-160. https://doi.org/10.1080/03115510903523292

ZHANG N., XIA W., DONG Y. & SHANG H. 2008. — Conodonts and radiolarians from pelagic cherts of the Frasnian-Famennian boundary interval at Bancheng, Guangxi, China: Global recognition of the upper Kellwasser event. *Marine Micropaleontology* 67 (1-2): 180-190. https://doi.org/10.1016/j.marmicro.2008.01.011

ZHURALEVA I. T. 1975. — *Kembriyskaya Fauna i Flora khrebta Dzhagdyi (Dal'niy Vostok)* [*The Cambrian fauna and flora of the Dzahagda Ridge*]. Trudyi Instituta, Geologii i Geogiziki, Sibiriskoe Otlodelenie, Akademiya Nauk SSSR 226: 52-56.

Submitted on 25 October 2016;
accepted on 17 March 2017;
published on 29 September 2017.

APPENDIX

APPENDIX 1. — Inventory of Paleozoic radiolarian species (1880-2016). Abbreviations, orders: **Al**, Albaillellaria; **Ar**, Archaeospicularia; **E**, Entactinaria; **L**, Latentifistularia; **?N**, possible Nassellaria; **S**, Spumellaria; **IS**, incertae sedis. Status: **n.d.**, *nomina dubium*; **n.n.**, *nomina nuda*; **n.r.**, not radiolarians; **s.s.**, sponge spicules; **inv.**, invalid. Types species: **T**, valid type species; **Td**, types that are *nomina dubia*; **Th**, types that are homonyms; **Ti**, type species that are invalid names; **Ts**, types that are synonyms. **n-b type**, name-bearing type. The numbers in brackets after genus names correspond to the figure's numbers in Caridroit *et al.* 2017 (this issue). XLS version of this list is available on the website of *Geodiversitas*.

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
Acanthopyle							
Acanthopyle antiqua	E	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Acanthopyle antiqua	E	–	T	Deflandre 1963: 3981	Lower Carboniferous	Visean	Cabrières, Hérault, France
Acanthosphaera							
Acanthosphaera antiqua	–	n.d.	–	Hinde 1890: 51	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Acanthosphaera australis	–	n.d.	–	Hinde 1899a: 48	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Acanthosphaera cyclocera	–	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Acanthosphaera dodecaspinosa	–	n.d.	–	Aberdeen 1940: 137	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Acanthosphaera entactinia	–	n.d.	–	Rüst 1892: 147	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Acanthosphaera etheridgei	–	n.d.	–	Hinde 1899a: 49	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Acanthosphaera grandispinosa	–	n.d.	–	Aberdeen 1940: 138	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Acanthosphaera hirsuta	–	n.d.	–	Aberdeen 1940: 138	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Acanthosphaera laxa	–	n.d.	–	Hinde & Fox 1895: 637	Carboniferous	Serpukhovian-Bashkirian	Codden Hill bed, Devon, England, UK
Acanthosphaera macracantha	–	n.d.	–	Rüst 1892: 147	Lower Silurian	–	Cabrières, Hérault, France
Acanthosphaera microspinosa	–	n.d.	–	Aberdeen 1940: 138	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Acanthosphaera minuta	–	n.d.	–	Ruedemann & Wilson 1936: 1571	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Acanthosphaera perspinosa	–	n.d.	–	Ruedemann & Wilson 1936: 1571	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Acanthosphaera polygonophora	–	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Acanthosphaera robusta	–	n.d.	–	Ruedemann & Wilson 1936: 1571	Lower Ordovician	Floian	Normanskill chert, Ghent, Columbia County, New York, USA
***Aciferopylorum* (254)**							
Aciferopylorum admirandum	E	–	–	Nazarov & Ormiston 1990: 22	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Aciferopylorum admirandum	S	inv.	–	Nazarov & Ormiston 1993: 43	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Aciferopylorum admirandum	E	n.n.	Th, Ts	Nazarov 1988: 71	Middle Silurian	Homerian	Maksyutov Complex, Tarangul River, 10 km N of Kosistek Village, S Urals, Russia
Acrosphaera							
Acrosphaera xinhui	–	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Acrosphaera glitzii	–	n.d.	–	Rüst 1892: 140	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Acrosphaera herzynica	–	n.d.	–	Rüst 1892: 140	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Actinomma							
Actinomma schaebenholzianum	–	n.d.	–	Rüst 1892: 148	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Adamas* (289)**							
Adamas cathedrarius	IS (O&F)	n.c.	T, Th	Afanasieva 2000a: 85	Upper Devonian	Famennian	Zadonsk Formation, W Lekkeyaginsk-65, Saremboi-Lekkeyaga, Timan-Pechora Basin, Russia
***Afanasievella* (76)**							
Afanasievella apachensis	E	–	T	Nestell & Nestell 2010: 23	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
***Aitchisonellum* (48)**							
Aitchisonellum aspinosus	Ar	–	Ts	Won *in* Won & Below 1999: 356	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
***Albaillella* (1)**							
Albaillella amplificata	Al	–	Ts	Nazarov & Ormiston 1985: 46	Upper Carboniferous	Gzhelian	E of Saraktash, Nikol Village, Ural River, Bashkirsk Region, Urals, Russia
Albaillella amygdalaspinosa	Al	–	–	Schwartzapfel & Holdsworth 1996: 59	Lower Carboniferous	Visean	Sycamore Limestone, southern Arbuckle Mountains, Murray County, Oklahoma, USA
Albaillella angusta	Al	–	–	Kuwahara 1999: 91	Upper Permian	Wuchiapingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Mino Valley, Seki City, Gifu, Japan
Albaillella apporrecta	Al	–	–	Nazarov & Ormiston 1985: 47	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Albaillella asymmetrica	Al	–	–	Ishiga & Imoto *in* Ishiga *et al.* 1982b: 276	Lower Permian	Kungurian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Ashimi-dani section, Ukyo-ku, Kyoto, Japan
Albaillella bialata	Al	–	–	Wu & Feng *in* Wu *et al.* 2010: 882	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Albaillella bipennata	Al	–	–	Cheng 1986: 50	Upper Carboniferous	Bashkirian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA
Albaillella brauni	Al	–	–	Won 1998: 224	Lower Carboniferous	Tournaisian	Oese, Rheinische Schiefergebirge, Germany
Albaillella brushensis	Al	–	–	Cheng 1986: 51	Upper Carboniferous	Bashkirian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA
Albaillella cartalla	Al	–	Ts	Ormiston & Lane 1976: 171	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Albaillella cavitata	Al	–	–	Kuwahara 1999: 90	Upper Permian	Wuchiapingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Mino Valley, Seki City, Gifu, Japan
Albaillella cornuta	Al	–	–	Deflandre 1952: 872	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Albaillella crenulata	Al	–	–	Won 1991a: 18	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Albaillella cylindra	Al	–	–	Schwartzapfel & Holdsworth 1996: 53	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Albaillella deflandrei	Al	–	–	Gourmelon 1987: 85	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Albaillella dellensis	Al	–	–	Park & Won 2012: 42	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Albaillella demenita	Al	–	–	Nazarov *in* Isakova & Nazarov 1986: 112	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Albaillella eliasi	Al	–	–	Schwartzapfel & Holdsworth 1996: 56	Lower Carboniferous	Serpukhovian	Goddard Formation, Oil Creek section, Johnston County, Oklahoma, USA
Albaillella excelsa	Al	–	–	Ishiga, Kito & Imoto 1982a: 17	Upper Permian	Changhsingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Ubara section, Fukuchiyama City, Kyoto, Japan
Albaillella fida	Al	–	–	Jin & Feng *in* Jin *et al.* 2007: 14	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Albaillella flabellata	Al	–	–	Jin & Feng *in* Jin *et al.* 2007: 11	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Albaillella* (1) continuation**							
Albaillella flexa	Al	–	–	Kuwahara *in* Kuwahara & Sakamoto 1992: 39	Upper Permian	Changhsingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Mino Valley, Seki City, Gifu, Japan
Albaillella flexiloqua	Al	–	–	Nazarov *in* Isakova & Nazarov 1986: 111	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Albaillella foremanae	Al	–	–	Cornell & Simpson 1985: 273	Middle Permian	Roadian	Bone Spring Formation, Guadalupe Mts., Culbertson County, W Texas, USA
Albaillella furcata	Al	–	–	Won 1983: 126	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Albaillella gordoni	Al	–	–	Schwartzapfel & Holdsworth 1996: 77	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Albaillella graciliforma	Al	–	–	Won & Seo 2010: 235	Lower Carboniferous	Tournaisian	Bergisches Land, N Westfalia, Germany
Albaillella groessensi	Al	–	–	Schwartzapfel & Holdsworth 1996: 64	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Albaillella harrisae	Al	–	–	Schwartzapfel & Holdsworth 1996: 70	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Albaillella hassi	Al	–	–	Schwartzapfel & Holdsworth 1996: 80	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Albaillella higginsi	Al	–	–	Schwartzapfel & Holdsworth 1996: 83	Lower Carboniferous	Serpukhovian	Goddard Formation, Oil Creek section, Johnston County, Oklahoma, USA
Albaillella hushanensis	Al	–	–	He & Feng *in* He *et al.* 2011: 477	Upper Permian	Changhsingian	Talung Formation, Hushan section, Nanjing, Jiangsu Region, China
Albaillella indensis	Al	–	–	Won 1983: 127	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Albaillella indensis ambigua	Al	–	–	Braun 1989: 86	Lower Carboniferous	upper Tournaisian	Pebbles of siliceous shale from the lower Main-valley near Frankfurt a. M., Germany
Albaillella indensis brauni	Al	–	–	Feng & Ye 1996: 20	Lower Carboniferous	Tournaisian	Yiliu Formation, Menxin section, S of Menglian, SW Yunnan, China
Albaillella inferioalata	Al	–	–	Nazarov *in* Isakova & Nazarov 1986: 113	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Albaillella inflata	Al	–	–	Cheng 1986: 52	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Albaillella ishigai	Al	–	–	Cheng 1986: 53	Lower Carboniferous	Serpukhovian	Sand Branch Member of Caney Formation, Pittsburg County, Oklahoma, USA
Albaillella kayai	Al	–	–	Noble, Tekin, Gedik & Pehlivan 2008: 46	Lower Carboniferous	Tournaisian	Baltalimani Formation, Istanbul, Turkey
Albaillella ladarezensis	Al	–	–	Gourmelon 1987: 88	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Albaillella lanceolata	Al	–	–	Schwartzapfel & Holdsworth 1996: 61	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Albaillella lauta	Al	–	–	Kuwahara *in* Kuwahara & Sakamoto 1992: 40	Upper Permian	Wuchiapingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Mino Valley, Seki City, Gifu, Japan
Albaillella levis	Al	–	Ts	Ishiga, Kito & Imoto 1982a: 17	Upper Permian	Changhsingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Ubara section, Fukuchiyama City, Kyoto, Japan
Albaillella longoriai	Al	–	–	Schwartzapfel & Holdsworth 1996: 58	Lower Carboniferous	Serpukhovian	Goddard Formation, Oil Creek section, Johnston County, Oklahoma, USA
Albaillella macrocephalata	Al	–	–	Cheng 1986: 54	Upper Carboniferous	Bashkirian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA
Albaillella magnifica	Al	–	–	Cheng 1986: 55	Upper Devonian	Famennian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA
Albaillella mameti	Al	–	–	Schwartzapfel & Holdsworth 1996: 63	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Albaillella minuta	Al	–	–	Won & Seo 2010: 235	Lower Carboniferous	Tournaisian	Bergisches Land, N Westfalia, Germany
Albaillella mucronulata	Al	–	–	Nestell, Pope & Nestell 2012: 230	Upper Carboniferous	Moscovian	Mouse Creek Formation, Excello Shale Member, south-central Iowa, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Albaillella* (1) continuation**							
Albaillella multisegmenta	Al	–	–	Wang *in* Wang *et al.* 2012: 107	Lower Carboniferous	Visean	Shijia Formation, Bancheng, Qinzhou area, Guangxi Zhuang Region, SW China
Albaillella murcheyae	Al	–	–	Schwartzapfel & Holdsworth 1996: 84	Lower Carboniferous	Serpukhovian	Goddard Formation, Oil Creek section, Johnston County, Oklahoma, USA
Albaillella nazarovi	Al	–	–	Cheng 1986: 55	Upper Carboniferous	Bashkirian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA
Albaillella nigriniae	Al	–	–	Cheng 1986: 56	Upper Carboniferous	Bashkirian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA
Albaillella ouachitaensis	Al	–	–	Cheng 1986: 57	Lower Carboniferous	Bashkirian	Jones Valley Shale, Le Flore County, eastern Oklahoma, USA
Albaillella palmeri	Al	–	–	Schwartzapfel & Holdsworth 1996: 67	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Albaillella paradoxa var. *globosa*	Al	–	–	Deflandre 1952: 872	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Albaillella paradoxa	Al	–	T	Deflandre 1952: 872	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Albaillella pennata	Al	–	–	Holdsworth 1966: 323	Upper Carboniferous	Bashkirian	Upper Dove Valley, SW Derbyshire, England, UK
Albaillella perforata	Al	–	–	Won 1991b: 85	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Albaillella perforata perforata	Al	–	–	Won 1991b: 86	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Albaillella perforata uniramosa	Al	–	–	Won 1991b: 87	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Albaillella pessagnoi	Al	–	–	Cheng 1986: 58	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Albaillella philipsensis	Al	–	–	Schwartzapfel & Holdsworth 1996: 66	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Albaillella prava	Al	–	–	Cheng 1986: 59	Upper Carboniferous	Bashkirian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA
Albaillella procera	Al	–	–	Cheng 1986: 60	Upper Carboniferous	Bashkirian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA
Albaillella protoforemanae	Al	–	–	Zhang, Henderson & Xia *in* Zhang *et al.* 2010: 154	Lower Permian	Kungurian	Dachongling section, Qinzhou City, Guangxi, S China
Albaillella protolevis	Al	–	–	Kuwahara 1999: 90	Upper Permian	Wuchiapingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Mino Valley, Seki City, Gifu, Japan
Albaillella pseudoparadoxa	Al	–	–	Won 1991a: 21	Lower Carboniferous	Tournaisian	Rheinisches Schiefergebirge, Frankenwald, Germany
Albaillella pseudoparadoxa spongiosa	Al	–	–	Won 1998: 225	Lower Carboniferous	Tournaisian	Oese, Rheinische Schiefergebirge, Germany
Albaillella ramsbottomi	Al	–	–	Schwartzapfel & Holdsworth 1996: 74	Lower Carboniferous	Serpukhovian	Goddard Formation, Oil Creek section, Johnston County, Oklahoma, USA
Albaillella riescheidensis	Al	–	–	Won 1990: 115	Lower Carboniferous	Visean	Riescheid Section, Wuppertal-Barmen, Germany
Albaillella robusta	Al	–	–	Cheng 1986: 60	Upper Carboniferous	Bashkirian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA
Albaillella rockensis	Al	–	–	Cheng 1986: 61	Lower Carboniferous	Bashkirian	Jones Valley Shale, Le Flore County, eastern Oklahoma, USA
Albaillella saltatoria	Al	–	–	Cheng 1986: 62	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Albaillella sandbergi	Al	–	–	Won 1991a: 23	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Albaillella saundersi	Al	–	–	Schwartzapfel & Holdsworth 1996: 82	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Albaillella shijaensis	Al	–	–	Wang *in* Wang *et al.* 2012: 107	Lower Carboniferous	Tournaisian	Shijia Formation, Bancheng, Qinzhou area, Guangxi Zhuang Region, SW China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Albaillella* (1) continuation**							
Albaillella sinuata	Al	–	–	Ishiga & Watase *in* Ishiga *et al.* 1986: 126	Middle Permian	Capitanian	Nishiki Group, Sangun-Chugoku Belt, Muikaichi area, Japan
Albaillella sinuosa	Al	–	–	Won & Seo 2010: 241	Lower Carboniferous	Tournaisian	Bergisches Land, N Westfalia, Germany
Albaillella spinosa	Al	–	–	Cheng 1986: 63	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Albaillella tela	Al	–	–	Schwartzapfel & Holdsworth 1996: 73	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Albaillella thomasi	Al	–	–	Braun 1990: 92	Lower Carboniferous	upper Tournaisian	Rheinisches Schiefergebirge, Frankenwald, Germany
Albaillella tooelensis	Al	–	–	Park & Won 2012: 44	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Albaillella triangularis	Al	–	–	Ishiga, Kito & Imoto 1982a: 17	Upper Permian	Changhsingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Ubara section, Fukuchiyama City, Kyoto, Japan
Albaillella tuboformа	Al	–	–	Won 1991b: 91	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Albaillella tumida	Al	–	–	Cheng 1986: 64	Upper Carboniferous	Bashkirian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA
Albaillella turgida	Al	–	–	Cheng 1986: 65	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Albaillella u-forma reflexa	Al	n.c.	–	Ling & Forsythe 1987: 257	Lower Permian	Sakmarian	Denaro Complex, Magallanes y Antartica Chilena, Chile
Albaillella uncus	Al	–	–	Won 1983: 127	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Albaillella undulata	Al	–	–	Deflandre 1952: 872	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Albaillella unusalata	Al	–	–	Cheng 1986: 66	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Albaillella utahensis	Al	–	–	Park & Won 2012: 44	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Albaillella xiaodongensis	Al	–	–	Wang *in* Wang *et al.* 1994: 185	Lower Permian	Kungurian	Dachongling section, Qinzhou City, Guangxi, S China
Albaillella yamakitai	Al	–	–	Kuwahara 1999: 89	Upper Permian	Wuchiapingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Mino Valley, Seki City, Gifu, Japan
Albaillella yaoi	Al	–	–	Kuwahara 1999: 92	Upper Permian	Changhsingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Mino Valley, Seki City, Gifu, Japan
Albaillella yaoi longa	Al	–	–	Jin & Feng *in* Jin *et al.* 2007: 11	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Albaillella? *protractosegmentata*	Al	–	–	Nazarov *in* Isakova & Nazarov 1986: 113	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Albaillella? *zhui*	Al	–	–	Feng & Liu 1993: 555	Upper Permian	Changhsingian	Jinghong Formation, NE of Jinghong City, Xishuang-bannadai County, SW Yunnan, China
***Altaiesphaera* (49)**							
Altaiesphaera acanthophora	Ar	–	T	Obut & Iwata 2000: 35	Lower Cambrian	Stage 4	Shashkunar Formation, Gorny Altai, SW Siberia, Russia
Altaiesphaera sparsispinosa	Ar	–	–	Obut & Iwata 2000: 35	Lower Cambrian	Stage 4	Shashkunar Formation, Gorny Altai, SW Siberia, Russia
Amphibrachium							
Amphibrachium bacillum	–	n.d.	–	Rüst 1892: 169	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Amphibrachium desecatum	–	n.d.	–	Rüst 1892: 169	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Amphibrachium devoniense	–	n.d.	–	Rüst 1892: 169	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Amphibrachium* (continuation)**							
Amphibrachium inaequale	–	n.d.	–	Rüst 1892: 169	Lower Devonian	–	Southern Urals, Russia
Amphibrachium pulchellum	–	n.d.	–	Rüst 1892: 169	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Amphymenium							
Amphymenium alienum	E	n.d.	T	Rüst 1892: 170	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Amphymenium krautii	E	–	–	Rüst 1892: 170	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Ampulla							
Ampulla tubulata	n.r.	i.s.	Ti	Rudenko & Panasenko 1990a: 123	Upper Permian	Changhsingian	Yastrebov Formation, Taukha Terrane, Primoriya, Russia
***Anakrusa* (335)**							
Anakrusa conspersa	n.r.	s.s	–	Nazarov 1977: 169	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Anakrusa miriacantha	n.r.	s.s	T	Nazarov 1977: 169	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
***Antygopora* (234)**							
Antygopora bella	S	–	–	Maletz & Bruton 2007: 271	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
Antygopora compacta	S	–	–	Maletz & Bruton 2007: 271	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
Antygopora intermediata	S	–	–	Won & Iams 2015b: 10	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Antygopora irregularia	S	–	–	Maletz 2007: 80	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Antygopora labyrinthina	S	–	–	Maletz & Bruton 2007: 273	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
Antygopora littleportensis	S	–	–	Won & Iams 2013: 15	Lower Ordovician	Floian	Little Port Complex Newfoundland, Canada
Antygopora littleportensis littleportensis	S	–	–	Won & Iams 2013: 15	Lower Ordovician	Floian	Little Port Complex Newfoundland, Canada
Antygopora littleportensis sigillata	S	–	–	Won & Iams 2013: 15	Lower Ordovician	Floian	Little Port Complex Newfoundland, Canada
Antygopora microspina	S	–	–	Maletz & Bruton 2007: 271	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
Antygopora ordovicica	S	–	T	Maletz & Bruton 2005: 5	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
***Apophysiactinia* (77)**							
Apophysiactinia duplospinula	n.r.	Calc-area	–	Won 1997a: 362	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Apophysiactinia iamsi	n.r.	Calc-area	–	Park & Won 2012: 64	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Apophysiactinia testacea	n.r.	Calc-area	–	Won 1997a: 364	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Apophysiactinia trispinula	n.r.	Calc-area	Tnr	Won 1997a: 364	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
***Apophysisphaera* (78)**							
Apophysisphaera elegans	E	–	–	Won 1997b: 374	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Apophysisphaera parva	E	–	–	Won 1997b: 375	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Apophysisphaera* (78) continuation**							
Apophysisphaera? membranacea	E	–	–	Won 1997b: 376	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Apophysisphaera? rosae	E	–	–	Won 1997b: 376	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Arbustrum							
Arbustrum congregatum	n.r.	Calc-area?	–	Wang 1989: 155	Lower Cambrian	–	Niutitang Formation, Sandu district, Guizhou Province, China
Arbustrum inflata	n.r.	Calc-area?	–	Wang 1989: 146	Lower Cambrian	–	Damiao Formation, Erlongping Group, Eastern Qinling ophiolite belt, Henan Province, China
Arbustrum luxurians	n.r.	Calc-area?	–	Wang 1989: 155	Lower Cambrian	–	Damiao Formation, Erlongping Group, Eastern Qinling ophiolite belt, Henan Province, China
Arbustrum strigosum	n.r.	Calc-area?	Tnr	Wang 1989: 146	Lower Cambrian	–	Damiao Formation, Erlongping Group, Eastern Qinling ophiolite belt, Henan Province, China
***Archaeocenosphaera* (50)**							
Archaeocenosphaera muricata	Ar	–	Ts	Obut & Iwata 2000: 34	Lower Cambrian	Stage 4	Shashkunar Formation, Gorny Altai, SW Siberia, Russia
***Archaeopyramisa* (203)**							
Archaeopyramisa concava	L	–	–	Cheng 1986: 185	Lower Carboniferous	Bashkirian	Jones Valley Shale, Le Flore County, eastern Oklahoma, USA
Archaeopyramisa convexa	L	–	–	Cheng 1986: 186	Lower Carboniferous	Serpukhovian	Sand Branch Member of Caney Formation, Pittsburg County, Oklahoma, USA
Archaeopyramisa globosa	L	–	–	Cheng 1986: 187	Lower Carboniferous	Serpukhovian	Sand Branch Member of Caney Formation, Pittsburg County, Oklahoma, USA
Archaeopyramisa haeckeli	L	–	Ts	Cheng 1986: 186	Lower Carboniferous	Serpukhovian	Sand Branch Member of Caney Formation, Pittsburg County, Oklahoma, USA
Archaeopyramisa robusta	L	–	–	Cheng 1986: 187	Lower Carboniferous	Serpukhovian	Sand Branch Member of Caney Formation, Pittsburg County, Oklahoma, USA
Archaeopyramisa talihinaensis	L	–	–	Cheng 1986: 188	Lower Carboniferous	Bashkirian	Jones Valley Shale, Le Flore County, eastern Oklahoma, USA
Archaeospongoprunum							
Archaeospongoprunum mengi	S	–	–	Feng *in* Feng *et al.* 2006a: 35	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Archeoentactinia* (43)**							
Archeoentactinia angulata	Ar	–	–	Won *in* Won & Below 1999: 332	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Archeoentactinia delicata	Ar	–	–	Won *in* Won & Below 1999: 332	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Archeoentactinia hexactinia	Ar	–	–	Won *in* Won & Below 1999: 333	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Archeoentactinia incaensis	Ar	–	T	Won *in* Won & Below 1999: 333	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Archeoentactinia tetractinia	Ar	–	–	Won *in* Won & Below 1999: 335	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
***Archeoproventocitum* (280)**							
Archeoproventocitum nudiformum	IS	–	T	Won, Iams & Reed 2007: 534	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Archeoproventocitum retiformum	IS	–	–	Won, Iams & Reed 2007: 534	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Archidiscus							
Archidiscus lens	–	n.d.	–	Rüst 1892: 166	Lower Carboniferous	–	Kieselschiefer, Harz, Germany

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Archocyrtium* (219)**							
Archocyrtium amoenus	N?	–	–	Afanasieva & Amon 2011: 1513	Upper Devonian	lower Famennian	Polar Urals, Palnik Yu River, Russia
Archocyrtium angulosum	N?	–	–	Deflandre 1973d: 150	Lower Carboniferous	Visean	Cabrières, Hérault, France
Archocyrtium breviora	N?	–	–	Park & Won 2012: 61	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Archocyrtium callimorphum	N?	–	–	Braun 1989: 90	Lower Carboniferous	upper Tournaisian	Pebbles of siliceous shale from the lower Main-valley near Frankfurt a. M., Germany
Archocyrtium castuligerum	N?	–		Deflandre 1972a: 3539	Lower Carboniferous	Visean	Cabrières, Hérault, France
Archocyrtium castuligerum	N?	n.n.	Ts	Deflandre 1972b: 15	Lower Carboniferous	Visean	Cabrières, Hérault, France
Archocyrtium clinoceros	N?	–	–	Deflandre 1973d: 151	Lower Carboniferous	Visean	Cabrières, Hérault, France
Archocyrtium coronaesimile	N?	–	–	Won 1983: 128	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Archocyrtium delicatum	N?	–	–	Cheng 1986: 123	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Archocyrtium diductum	N?	–	–	Deflandre 1973d: 150	Lower Carboniferous	Visean	Cabrières, Hérault, France
Archocyrtium dilatipes	N?	–	–	Deflandre 1973d: 150	Lower Carboniferous	Visean	Cabrières, Hérault, France
Archocyrtium effingi	N?	–	–	Kiessling & Tragelehn 1994: 231	Upper Devonian	Famennian	Frankenwald, north Bavaria, Germany
Archocyrtium eupectum	N?	–	–	Braun 1989: 90	Lower Carboniferous	upper Tournaisian	Pebbles of siliceous shale from the lower Main-valley near Frankfurt a. M., Germany
Archocyrtium ferreum	N?	–	–	Braun 1989: 90	Lower Carboniferous	upper Tournaisian	Pebbles of siliceous shale from the lower Main-valley near Frankfurt a. M., Germany
Archocyrtium formosum	N?	–	–	Cheng 1986: 124	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Archocyrtium lagabriellei	N?	–	–	Gourmelon 1987: 115	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Archocyrtium ludicrum	N?	–	–	Deflandre 1973d: 150	Lower Carboniferous	Visean	Cabrières, Hérault, France
Archocyrtium medium	N?	–	–	Liu & Hao 2006: 649	Upper Devonian	Famennian	Tielimaitidaban section, SW Tianshan, Xinjiang, China
Archocyrtium menglianense	N?	–	–	Wu *in* Wu & Li 1989: 341	Lower Carboniferous	Visean	Banshun section, Menglian County, Yunnan Province, China
Archocyrtium obesum	N?	–	–	Cheng 1986: 124	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Archocyrtium ormistoni	N?	–	–	Cheng 1986: 125	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Archocyrtium parvispina	N?	–	–	Park & Won 2012: 62	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Archocyrtium parvum	N?	–	–	Deflandre 1972a: 3536	Lower Carboniferous	Visean	Brétignolles-sur-mer, Vendée, Pays de la Loire, France
Archocyrtium parvum	N?	n.n.	–	Deflandre 1972b: 15	Lower Carboniferous	Visean	Brétignolles-sur-mer, Vendée, Pays de la Loire, France
Archocyrtium petrushevskaye	N?	–	–	Deflandre 1973d: 151	Lower Carboniferous	Visean	Cabrières, Hérault, France
Archocyrtium procerum	N?	–	–	Cheng 1986: 126	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Archocyrtium pulchrum	N?	–	–	Braun 1990: 126	Lower Carboniferous	upper Tournaisian	Rheinisches Schiefergebirge, Frankenwald, Germany
Archocyrtium riedeli	N?	n.n.	T	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Archocyrtium riedeli	N?	n.n.	–	Deflandre 1972a: 3539	Lower Carboniferous	Visean	Cabrières, Hérault, France

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Archocyrtium* (219) continuation**							
Archocyrtium riedeli	N?	–	–	Deflandre 1972b: 15	Lower Carboniferous	Visean	Cabrières, Hérault, France
Archocyrtium sashidai	N?	–	–	Feng *in* Feng *et al.* 2004b: 383	Lower Carboniferous	Visean	Shan-Thai terrane, Chiang Mai, NW Thailand
Archocyrtium shijiaensis	N?	–	–	Wang *in* Wang *et al.* 2012: 112	Lower Carboniferous	Tournaisian	Shijia Formation, Bancheng, Qinzhou area, Guangxi Zhuang Region, SW China
Archocyrtium strictum	N?	–	–	Deflandre 1973d: 151	Lower Carboniferous	Visean	Cabrières, Hérault, France
Archocyrtium tersae	N?		–	Deflandre 1972a: 3536	Lower Carboniferous	Visean	Brétignolles-sur-mer, Vendée, Pays de la Loire, France
Archocyrtium tersae	N?	n.n.	–	Deflandre 1972b: 15	Lower Carboniferous	Visean	Brétignolles-sur-mer, Vendée, Pays de la Loire, France
Archocyrtium typicum	N?	–	–	Cheng 1986: 126	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Archocyrtium validum	N?	–	–	Cheng 1986: 127	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Archocyrtium venustum	N?	–	–	Cheng 1986: 128	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Archocyrtium wonae	N?	–	–	Cheng 1986: 128	Lower Carboniferous	Bashkirian	Jones Valley Shale, Le Flore County, eastern Oklahoma, USA
Archocyrtium? *babini*	N?	–	–	Gourmelon 1986: 189	Lower Carboniferous	Tournaisian	Hautes-Pyrénées, France
***Arcoclathrata* (131)**							
Arcoclathrata alekseevi	E	–	–	Afanasieva & Amon 2016: 219	Lower Permian	Sakmarian	Kondurovka section, Sakmara River, Southern Urals, Russia
***Areolicaudatus* (181)**							
Areolicaudatus elongatus	L	n.n.	–	Feng 1992: 55	Upper Permian	Changhsingian	Papai Formation of Changning-Menglian Belt, Papai Village, Cangyuan County, Yunnan, China
Areolicaudatus semiglobosus	L	n.n.	–	Feng 1992: 55	Upper Permian	Changhsingian	Papai Formation of Changning-Menglian Belt, Papai Village, Cangyuan County, Yunnan, China
Areolicaudatus semiglobosus	L	–	T	Feng & Liu 1993: 545	Upper Permian	Changhsingian	Muyinhe Formation, Nanpan, Lancang County, Yunnan, China
***Arrectoalatus* (276)**							
Arrectoalatus bicorniger	IS	–	–	Nazarov *in* Isakova & Nazarov 1986: 124	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Arrectoalatus cernuus	IS	–	T	Nazarov & Ormiston 1985: 49	Upper Carboniferous	Gzhelian	E of Saraktash, Nikol Village, Ural River, Bashkirsk Region, Urals, Russia
Arrectoalatus eximius	IS	–	–	Nazarov *in* Isakova & Nazarov 1986: 123	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Arrectoalatus? *uncinatus*	IS	–	–	Rudenko & Panasenko 1990a: 122	Upper Permian	Changhsingian	Yastrebov Formation, Taukha Terrane, Primoriya, Russia
***Arrhiniella* (132)**							
Arrhiniella surrecta	–	n.n. -n.c.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
***Aspiculum* (284)**							
Aspiculum angulatum	IS	–	–	Won, Iams & Reed 2005: 441	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Aspiculum densum	IS	–	–	Won, Iams & Reed 2007: 507	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Aspiculum eccentricum	IS	–	T	Won, Iams & Reed 2005: 441	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Aspiculum gigantium	IS	–	–	Won, Iams & Reed 2007: 511	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Aspiculum jamesi	IS	–	–	Won, Iams & Reed 2007: 513	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Aspiculum* (284) continuation**							
Aspiculum jamesi parajamesi	IS	–	–	Won & Iams 2011: 163	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Aspiculum multistratum	IS	–	–	Won, Iams & Reed 2007: 515	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
***Astroentactinia* (79)**							
Astroentactinia biaciculata	E	–	–	Nazarov 1975: 84	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Astroentactinia capitanensis	E	–	–	Nestell & Nestell 2010: 20	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Astroentactinia crassata	E	–	–	Nazarov 1975: 85	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Astroentactinia deorsiacus	E	–	–	Nazarov & Ormiston 1993: 33	Upper Devonian	Famennian	Aitpaika River, Aktyubinsk region, Southern Urals, Russia
Astroentactinia deorsiacus	E	n.n.	–	Nazarov 1988: 129	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Astroentactinia digitosa	E	–	–	Braun 1990: 101	Lower Carboniferous	upper Tournaisian	Rheinisches Schiefergebirge, Frankenwald, Germany
Astroentactinia erinacea	E	–	–	Nazarov *in* Nazarov & Popov 1980: 45	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Astroentactinia formosa	E	–	–	Wang *in* Wang *et al.* 2012: 110	Lower Carboniferous	Tournaisian	Shijia Formation, Bancheng, Qinzhou area, Guangxi Zhuang Region, SW China
Astroentactinia inscita	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 67	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Astroentactinia luxuria	E	–	–	Nazarov & Ormiston 1985: 23	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Astroentactinia mendosa	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 68	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Astroentactinia pauxilla	E	–	–	Nazarov 1975: 86	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Astroentactinia porosa	E	–	–	Maldonado & Noble 2010: 84	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Astroentactinia praeacudura	E	n.n.	–	Nazarov 1988: 130	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Astroentactinia radiata	E	–	–	Braun 1990: 102	Lower Carboniferous	upper Tournaisian	Rheinisches Schiefergebirge, Frankenwald, Germany
Astroentactinia ramificans	E	–	T	Nazarov 1975: 87	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Astroentactinia rusaevi	E	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	lower Frasnian	Domanik Formation, outcrop 1904, Lyaiol River, Timan-Pechora Basin, Russia
Astroentactinia rusaevi	E	–	–	Afanasieva 2000b: 140	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Astroentactinia spatiosa	E	–	–	Braun 1990: 103	Lower Carboniferous	upper Tournaisian	Rheinisches Schiefergebirge, Frankenwald, Germany
Astroentactinia speciosa	E	–	–	Amon & Braun 1994: 2	Lower Permian	Artinskian	Burtsevesky horizon, Dalny Tulkas Rill, Bashkortostan Region, S Urals, Russia
Astroentactinia stellata	E	–	T	Nazarov 1975: 82	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Astroentactinia tantilla	E	–	–	Nazarov 1975: 85	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Astroentactinia tikhomirovi	E	–	–	Afanasieva 2000b: 142	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Astroentactinia valentiniae	E	–	–	Nazarov *in* Nazarov *et al.* 1981: 87	Upper Devonian	Famennian	Duksundinsk Formation, along Duksunda River, Magadan, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Astroentactinia* (79) continuation**							
Astroentactinia vishnevskayae	E	–	–	Afanasieva 2000b: 142	Upper Devonian	middle Frasnian	Domanik Formation, borehole Ukhtinskaya-3B, SW of Uktha, Timan-Pechora Basin, Russia
Astroentactinia? crubellata	E	–	–	Nazarov 1975: 86	Lower Silurian	–	Sakmarsk Formation, Bazyam, Sakmar, Orenburgskaya Region, S Urals, Russia
Astroentactinia? echinosimilis	E	–	–	Won 1991b: 95	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Astroentactinia? mirousi	E	–	–	Gourmelon 1986: 184	Lower Carboniferous	Tournaisian	Hautes-Pyrénées, France
Astroentactinia? miscella	E	–	–	Nazarov *in* Nazarov & Popov 1980: 47	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Astroentactinia? radiata	E	–	–	Aitchison 1993b: 118	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Astroentactinia? stellaesimilis	E	–	–	Won 1991b: 96	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Astrophacus							
Astrophacus cingulatus	–	n.d.	–	Aberdeen 1940: 139	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
***Auliela* (336)**							
Auliela annula	n.r.	s.s	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Auliela aspersa	n.r.	s.s	Ts	Nazarov 1977: 170	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Auliela taplowensis	n.r.	s.s	–	Webby & Blom 1986: 151	Upper Ordovician	Katian	Malongulli Formation, Belubula River, E of Canowindra, central NSW, Australia
Axellipsis							
Axellipsis longitudinalis	–	n.d.	–	Rüst 1892: 152	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
***Azyrtalia* (337)**							
Azyrtalia dilata	n.r.	Calc-area	Tnr	Nazarov 1973b: 12	Lower Cambrian	Stage 2	Bograd Mountains, Betenevskiy area, Khakasiya Region, Russia
***Batoballa* (338)**							
Batoballa communis	n.r.	Calc-area	Tnr	Wang *in* Wang *et al.* 2008: 400	Middle Ordovician	Dapingian	Heituao Formation, Tarim Basin, Kuruktag region, Xinjiang, China
Batoballa longiovata	n.r.	Calc-area	–	Wang *in* Wang *et al.* 2008: 401	Middle Ordovician	Dapingian	Heituao Formation, Tarim Basin, Kuruktag region, Xinjiang, China
***Belowea* (80)**							
Belowea crassitesta	E	–	–	Won 1983: 131	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Belowea hexaculeata	E	–	–	Won 1990: 121	Lower Carboniferous	Visean	Riescheid Section, Wuppertal-Barmen, Germany
Belowea tenuistesta	E	–	–	Won 1983: 133	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
***Beothuka* (235)**							
Beothuka aitchisoni	S	–	–	Won & Iams 2011: 161	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka echinata	S	–	–	Won & Iams 2013: 16	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka grosmornensis	S	–	–	Won & Iams 2011: 162	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka longispiniforma	S	–	–	Wang *in* Wang *et al.* 2008: 397	Middle Ordovician	Dapingian	Heituao Formation, Tarim Basin, Kuruktag region, Xinjiang, China
Beothuka maletziana	S	–	–	Won & Iams 2015b: 12	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka multiaculeata	S	–	–	Won & Iams 2015a: 26	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka robusta bispinosa	S	–	–	Won & Iams 2013: 17	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Beothuka* (235) continuation**							
Beothuka robusta intermediata	S	–	–	Won & Iams 2013: 17	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka spissa	S	–	–	Won & Iams 2015a: 26	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka spongiosa	S	–	–	Won & Iams 2013: 17	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka spongiosa spongiosa	S	–	–	Won & Iams 2013: 19	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka spongiosa variabilis	S	–	–	Won & Iams 2013: 19	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka stougei	S	–	–	Won & Iams 2011: 162	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka terranova	S	–	T	Aitchison, Flood & Malpas 1998: 417	Lower Ordovician	Tremadocian	Little Port Complex at Winter House Brook Lookout, Newfoundland, Canada
Beothuka terranova dimunata	S	–	–	Won & Iams 2015a: 25	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka terranova intermediata	S	–	–	Won & Iams 2015a: 25	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka terranova mutispinosa	S	–	–	Won & Iams 2011: 163	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka? *concreta*	S	–	–	Won & Iams 2013: 21	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Beothuka? *stellata*	S	–	–	Won & Iams 2011: 163	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
***Bientactinosphaera* (81)**							
Bientactinosphaera maslakovae	E	–	–	Afanasieva 2000a: 51	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Bientactinosphaera miletenkoi	E	–	–	Afanasieva 2000c: 372	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Bientactinosphaera morozovi	E	–	–	Afanasieva 2000a: 53	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Bientactinosphaera pinica	E	–	–	Afanasieva 2000a: 50	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Bientactinosphaera spinofoliacea	E	–	–	Nazarov & Afanasieva *in* Afanasieva 2000c: 54	Upper Devonian	Famennian	Zadonsk Formation, W Lekkeyaginsk-65, Saremboi-Lekkeyaga, Timan-Pechora Basin, Russia
Bientactinosphaera zuraevi	E	–	–	Afanasieva & Amon 2011: 1501	Upper Devonian	Frasnian	Polar Urals, Palnik Yu River, Russia
***Bipylospongia* (238)**							
Bipylospongia rudosa	S	–	T	Noble 1994: 37	Upper Silurian	Gorstian	Caballos Novaculite Formation, East Bourland Mts., Marathon Basin, W Texas, USA
***Bisphaera* (82)**							
Bisphaera beniguna	E	–	–	Won 1997a: 344	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Bisphaera cribrisimilis	E	–	–	Won 1997a: 345	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Bisphaera cribrisimilis crassa	E	–	–	Won 1997a: 345	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Bisphaera cribrisimilis cribrisimilis	E	–	–	Won 1997a: 345	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Bisphaera dissimilicortex	E	–	–	Won 1997a: 346	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Bisphaera solidispinosa	E	–	Th, Ts	Won 1997a: 346	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Bisphaera uniprocera	E	–	–	Won 1997a: 346	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
Bissulentactinia							
Bissulentactinia diaphoraxis	–	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
***Bissylentactinia* (133)**							
Bissylentactinia bifida	E	–	–	Nazarov *in* Nazarov & Popov 1980: 64	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Bissylentactinla penita	E	–	–	Nazarov 1975: 95	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Bissylentactinia pilifera	E	–	–	Nazarov *in* Nazarov & Popov 1980: 64	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Bissylentactinia rudicula	E	–	Ts	Nazarov 1975: 94	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Bistarkum							
Bistarkum martiali	S	–	–	Feng *in* Feng *et al.* 2006a: 37	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Blastulospongia							
Blastulospongia mindyallica	n.r.	Calc-area	–	Bengtson 1986: 205	Upper Cambrian	Paibian	Mungerebar Limestone, Georgina Basin, Queensland, Australia
Blastulospongia monothalamos	n.r.	Calc-area	Tnr	Pickett & Jell 1983: 87	Middle Cambrian	–	Mootwingee, New South Wales
Blastulospongia polytreta	n.r.	Calc-area	–	Conway Morris & Chen 1990: 26	Lower Cambrian	Stage 2-Stage 3	Quarry in Taishanmiao section, N of Yichang City, Hubei Province, China
***Borisella* (83)**							
Borisella bykovae	E	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, outcrop 1904, Lyaiol River, Timan-Pechora Basin, Russia
Borisella bykovae	E	–	–	Afanasieva 2000b: 144	Upper Devonian	middle Frasnian	Domanik Formation, outcrop 1904, Lyaiol River, Timan-Pechora Basin, Russia
Borisella dunhilli	E	–	–	Noble & Webby 2009: 555	Upper Ordovician	Katian	Malongulli Formation, Cliefden Caves area, NSW, Australia
Borisella invisitata	E	–	–	Afanasieva 2000a: 45	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Borisella maksimovae	E	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Borisella maksimovae	E	–	T	Afanasieva 2000b: 144	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Borisella mariae	E	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Borisella mariae	E	–	–	Afanasieva 2000b: 145	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Borisella primitiva	E	–	–	Afanasieva 2000a: 47	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
***Brianellium* (182)**							
Brianellium buckense	L	–	–	Cheng 1986: 181	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Brianellium gordoni	L	–	–	Cheng 1986: 181	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Brianellium holdsworthi	L	–	Ts	Cheng 1986: 182	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Brianellium ishigai	L	–	–	Cheng 1986: 182	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Brianellium* (182) continuation**							
Brianellium laxum	L	–	–	Cheng 1986: 183	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Brianellium medium	L	–	–	Cheng 1986: 183	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Brianellium obesum	L	–	–	Cheng 1986: 184	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Brianellium ruestae	L	–	–	Cheng 1986: 184	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
***Callela* (84)**							
Callela conispinosa	E	–	–	Won 1983: 134	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Callela hexactina	E	–	–	Won 1983: 134	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Callela parvispinosa	E	–	–	Won 1983: 134	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Callela stellaesimilis	E	–	T	Won 1983: 135	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Callela tetravalidaculeata	E	–	–	Won 1990: 132	Lower Carboniferous	Visean	Riescheid Section, Wuppertal-Barmen, Germany
Callela variaculeata	E	–	–	Park & Won 2012: 66	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
***Campanulithus* (9)**							
Campanulithus falcatus	Al	–	T	Nazarov & Rudenko 1981: 137	Lower Permian	Artinskian	Aktastyi River, Orenburgskaya region, Southern Urals, Russia
Campanulithus insuetus	Al	–	–	Nestell & Nestell 2010: 14	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
***Camptoalatus* (277)**							
Camptoalatus benignus	IS	–	–	Nazarov & Ormiston 1985: 49	Upper Carboniferous	Gzhelian	E of Saraktash, Nikol Village, Ural River, Bashkirsk Region, Urals, Russia
Camptoalatus monopterygius	IS	–	T	Nazarov & Rudenko 1981: 138	Lower Permian	Sakmarian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Camptoalatus volaticus	IS	–	–	Maldonado & Noble 2010: 80	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Camptoalatus? *aretinus*	IS	–	–	Nazarov *in* Isakova & Nazarov 1986: 121	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
***Cancellientactinia* (291)**							
Cancellientactinia acifera	IS (O&F)	–	T	Obut & Shcherbanenko 2008: 374	Upper Devonian	Frasnian	Gryaznuka Formation, Gryaznukha Brook, Rudny Altai, southern West Siberia, Russia
***Cancellisphaera* (51)**							
Cancellisphaera kozuri	Ar	–	–	Won & Iams 2015a: 20	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
***Cangyuanella* (10)**							
Cangyuanella deflandrei	Al	n.n.	–	Feng 1992: 55	Upper Permian	Changhsingian	Papai Formation of Changning-Menglian Belt, Papai Village, Cangyuan County, Yunnan, China
Cangyuanella deflandrei	Al	–	T	Feng & Liu 1993: 550	Upper Permian	Changhsingian	Muyinhe Formation, Nanpan, Lancang County, Yunnan, China
***Cariver* (29)**							
Cariver dorsoconvexus	Al	–	–	Kozur 1993: 109	Upper Permian	upper Changhsingian	Sosio Valley Area, Torrente San Calogero, Western Sicily, Italy

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
Carposphaera							
Carposphaera aberdeenae	–	n.d.	–	Riedel *in* Nitecki 1963: 164	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Carposphaera equalis	–	n.d.	–	Aberdeen 1940: 133	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Carposphaera infracrinita	–	n.d.	–	Rüst 1892: 136	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Carposphaera jejuna	–	n.d.	–	Rüst 1892: 136	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Carposphaera macractinia	–	n.d.	–	Rüst 1892: 136	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Carposphaera magna	–	n.d.	–	Aberdeen 1940: 133	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Carposphaera magna	–	n.d.	–	Rüst 1892: 136	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Carposphaera nana	–	n.d.	–	Hinde 1899b: 215	Middle Devonian	Givetian	Chypons Farm, Mullion Parrish, Cornwall, England, UK
Carposphaera pygmaea	–	n.d.	–	Rüst 1892: 135	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
***Carposphaeridium* (307)**							
Carposphaeridium cambrense	–	n.d.	Td	Chapman 1923: 37	Upper Cambrian	–	Lachlan Fold Belt, Victoria, Australia
Caryosphaera							
Caryosphaera groddeekii	–	n.d.	–	Rüst 1892: 139	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
***Caspiaza* (292)**							
Caspiaza aculeata	IS (O&F)	–	–	Afanasieva 1986: 32	Lower Carboniferous	Serpukhovian	Tyan-Shan, Karachaganak area, Pre-Caspinsk, Batys Qazaqstan, Kazakhstan
Caspiaza calva	IS (O&F)	–	T	Afanasieva 1986: 31	Lower Carboniferous	Serpukhovian	Tyan-Shan, Karachaganak area, Pre-Caspinsk, Batys Qazaqstan, Kazakhstan
Caspiaza collaricostulata	IS (O&F)	–	–	Afanasieva 1993: 117	Upper Devonian	Famennian	Polar Urals, Yamalo-Nenetskiy Region, Russia
Caspiaza spinifera	IS (O&F)	–	–	Afanasieva 1993: 117	Upper Devonian	Famennian	Polar Urals, Yamalo-Nenetskiy Region, Russia
Caspiaza urceus	IS (O&F)	–	–	Afanasieva 1986: 32	Lower Carboniferous	Serpukhovian	Tyan-Shan, Karachaganak area, Pre-Caspinsk, Batys Qazaqstan, Kazakhstan
***Cauletella* (170)**							
Cauletella constricta	L	–	–	Feng *in* Feng *et al.* 2006b: 833	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Cauletella paradoxa	L	–	–	Shang, Caridroit & Wang 2001: 233	Upper Permian	Changhsingian	Changshing Formation, Liuqiao section, Fusui County, southern Nanning, Guangxi, China
Cauletella porosa	L	–	–	Feng *in* Feng *et al.* 2006b: 833	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Cavasphaera* (285)**							
Cavasphaera diversa	IS	–	T	Won & Iams 2015a: 30	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Cavasphaera inaequalis	IS	–	–	Won & Iams 2015a: 30	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Cecryphalium							
Cecryphalium infundibulum	–	n.d.	–	Rüst 1892: 184	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Cecryphalium oligoporum	–	n.d.	–	Rüst 1892: 183	Upper Permian	–	Novgorod, Russia
Cenellipsis							
Cenellipsis areolata	–	n.d.	–	Rüst 1892: 151	Lower Devonian	–	Southern Urals, Russia
Cenellipsis cepaeformis	–	n.d.	–	Rüst 1892: 152	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Cenellipsis citrus	–	n.d.	–	Rüst 1892: 151	Lower Devonian	–	Southern Urals, Russia
Cenellipsis curvatoporata	–	n.d.	–	Rüst 1892: 151	Lower Devonian	–	Southern Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Cenellipsis* (continuation)**							
Cenellipsis cypridina	–	n.d.	–	Rüst 1892: 152	Lower Devonian	–	Southern Urals, Russia
Cenellipsis diversipora	–	n.d.	–	Rüst 1892: 151	Lower Silurian	–	Cabrières, Hérault, France
Cenellipsis favosa	–	n.d.	–	Hinde 1899b: 216	Middle Devonian	Givetian	Chypons Farm, Mullion Parrish, Cornwall, England, UK
Cenellipsis multiplex	–	n.d.	–	Rüst 1892: 152	Carboniferous	–	Bükk-Gebirge, Inner Western Carpathians, Hungary
Cenellipsis perovalis	–	n.d.	–	Rüst 1892: 151	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Cenellipsis rectipora	–	n.d.	–	Rüst 1892: 151	Lower Devonian	–	Southern Urals, Russia
Cenellipsis reticulosa	–	n.d.	–	Rüst 1892: 152	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Cenellipsis scitula	–	n.d.	–	Hinde 1899b: 216	Middle Devonian	Givetian	Chypons Farm, Mullion Parrish, Cornwall, England, UK
Cenellipsis setosa	–	n.d.	–	Hinde 1899b: 216	Middle Devonian	Givetian	Chypons Farm, Mullion Parrish, Cornwall, England, UK
Cenodiscus							
Cenodiscus intermedius	–	n.d.	–	Rüst 1892: 162	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Cenodiscus nummularis	–	n.d.	–	Rüst 1892: 162	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Cenodiscus primordialis	–	n.d.	–	Rüst 1892: 161	Lower Silurian	–	Cabrières, Hérault, France
Cenosphaera							
Cenosphaera aberdeenae	?Ar	–	–	Furutani 1990: 51	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Cenosphaera affinis	–	n.d.	–	Hinde 1899a: 44	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Cenosphaera antiqua	–	n.d.	–	Ruedemann & Wilson 1936: 1567	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Cenosphaera apiaria	–	n.d.	–	Rüst 1892: 135	Lower Devonian	–	Southern Urals, Russia
Cenosphaera cabrierensis	–	n.d.	–	Deflandre 1973c: 1150	Lower Carboniferous	Visean	Cabrières, Hérault, France
Cenosphaera carbonica	–	n.d.	–	Rüst 1892: 134	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Cenosphaera castanea	–	n.d.	–	Rüst 1892: 134	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Cenosphaera hexagonalis	–	n.d.	–	Aberdeen 1940: 133	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Cenosphaera hexata	–	n.d.	–	Pulfrey 1932: 194	Lower Carboniferous	Serpukhovian	Calver Sough, Derbyshire, England, UK
Cenosphaera ingens	–	n.d.	–	Rüst 1892: 134	Lower Silurian	–	Cabrières, Hérault, France
Cenosphaera macropora	–	n.d.	–	Rüst 1892: 134	Lower Silurian	–	Cabrières, Hérault, France
Cenosphaera marathonensis	–	n.d.	–	Riedel *in* Nitecki 1963: 165	Upper Devonian	Famennian	Marathon Basin, Texas, USA
Cenosphaera rossica	–	n.d.	–	Rüst 1892: 134	Lower Devonian	–	Southern Urals, Russia
Cenosphaera scitula	–	n.d.	–	Hinde 1899a: 43	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Cenosphaera semiequalis	–	n.d.	–	Aberdeen 1940: 133	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Cenosphaera uralensis	–	n.d.	–	Rüst 1892: 134	Lower Devonian	–	Southern Urals, Russia
Cenosphaera variabilis	–	n.d.	–	Aberdeen 1940: 133	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
***Centrocubus*?**							
Centrocubus? giganteus	E	–	–	Won 1983: 135	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Centrolonche							
Centrolonche obscura	–	n.n.	–	Deflandre 1953: 404	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
***Cerarchocyrtium* (220)**							
Cerarchocyrtium ambiguum	N?	–	T	Deflandre 1973d: 151	Lower Carboniferous	Visean	Cabrières, Hérault, France
Cerarchocyrtium dirum	N?	–	–	Cheng 1986: 129	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Cerarchocyrtium* (220) continuation**							
Cerarchocyrtium singularium	N?	–	–	Cheng 1986: 130	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Cerarchocyrtium tinnulum	N?	–	–	Deflandre 1973d: 152	Lower Carboniferous	Visean	Cabrières, Hérault, France
***Ceratoclathrulum* (221)**							
Ceratoclathrulum ambiguum	–	n.n.	Tn	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
***Ceratoikiscum* (11)**							
Ceratoikiscum acatangulatum	Al	–	–	Nazarov *in* Nazarov *et al.* 1975: 103	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Ceratoikiscum acatangulatum	Al	–	–	Nazarov *in* Nazarov *et al.* 1977: 919	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Ceratoikiscum araneosum	Al	–	–	Afanasieva 2000c: 367	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Ceratoikiscum ardmorensis	Al	–	–	Schwartzapfel & Holdsworth 1996: 116	Upper Devonian	upper Famennian	Woodford Formation, Criner Hills 2A section, Carter County, Oklahoma, USA
Ceratoikiscum armiger	Al	–	–	Furutani 1990: 51	Upper Silurian	Ludfordian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan
Ceratoikiscum astrum	Al	–	–	Cheng 1986: 76	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Ceratoikiscum asymmetricum	Al	–	–	Won 1998: 231	Lower Carboniferous	Tournaisian	Oese, Rheinische Schiefergebirge, Germany
Ceratoikiscum avimexpectans	Al	–	T	Deflandre 1953: 409	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Ceratoikiscum avimexpectans nonspongiosum	Al	–	–	Won 1991b: 97	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Ceratoikiscum berggreni	Al	–	–	Gourmelon 1987: 96	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Ceratoikiscum bicancellatum	Al	–	–	Holdsworth 1969: 228	Upper Carboniferous	Bashkirian	Waterhouses, Staffordshire, England, UK
Ceratoikiscum bujugum	Al	–	–	Foreman 1963: 288	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Ceratoikiscum calvum	Al	–	–	Stratford & Aitchison 1997: 245	Lower Devonian	Emsian	Gamilaroi terrane, Glenrock Station, New England orogen, NSW, Australia
Ceratoikiscum canningense	Al	–	–	Aitchison 1993b: 108	Upper Devonian	lower Famennian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Ceratoikiscum carinatum	Al	–	–	Won 1998: 234	Lower Carboniferous	Tournaisian	Oese, Rheinische Schiefergebirge, Germany
Ceratoikiscum chengi	Al	–	–	Schwartzapfel & Holdsworth 1996: 113	Upper Devonian	upper Famennian	Woodford Formation, Criner Hills 2A section, Carter County, Oklahoma, USA
Ceratoikiscum chengi	Al	–	–	Won 1998: 235	Lower Carboniferous	Tournaisian	Oese, Rheinische Schiefergebirge, Germany
Ceratoikiscum coroniferum	Al	–	–	Luo, Aitchison & Wang 2002: 115	Middle Devonian	Givetian	Tanhe Formation, Wuxiangling section, S of Nanning, Guangxi Zhuang Region, SW China
Ceratoikiscum costaciculare	Al	–	–	Nazarov 1974a: 44	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Ceratoikiscum crinerensis	Al	–	–	Schwartzapfel & Holdsworth 1996: 106	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Ceratoikiscum delawarensis	Al	–	–	Schwartzapfel & Holdsworth 1996: 119	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Sand Branch Section, Johnston County, Oklahoma, USA
Ceratoikiscum delicatum	Al	–	–	Cheng 1986: 78	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Ceratoikiscum* (11) continuation**							
Ceratoikiscum echinatum	Al	–	–	Aitchison 1993b: 109	Upper Devonian	lower Famennian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Ceratoikiscum echinocostatum	Al	–	–	Nazarov 1975: 102	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Ceratoikiscum elmensis	Al	–	–	Cheng 1986: 80	Upper Carboniferous	Bashkirian	Sand Branch Member of Caney Formation, Pittsburg County, Oklahoma, USA
Ceratoikiscum extraordinarium	Al	–	–	Cheng 1986: 80	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Ceratoikiscum famenium	Al	–	–	Nazarov & Ormiston 1990: 23	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Ceratoikiscum famenium	Al	n.n.	–	Nazarov 1988: 130	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Ceratoikiscum famenium	E	n.n.	–	Nazarov 1988: 132	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Ceratoikiscum famennium	Al	inv.	–	Nazarov & Ormiston 1993: 50	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Ceratoikiscum fenestratum	Al	–	–	Won & Seo 2010: 245	Lower Carboniferous	Visean	Bergisches Land, N Westfalia, Germany
Ceratoikiscum formosum	Al	–	–	Braun 1990: 96	Lower Carboniferous	upper Tournaisian	Rheinisches Schiefergebirge, Frankenwald, Germany
Ceratoikiscum fragile	Al	–	–	Aitchison 1993b: 109	Upper Devonian	lower Famennian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Ceratoikiscum goodbodyi	Al	–	–	Cheng 1986: 80	Lower Carboniferous	Bashkirian	Jones Valley Shale, Le Flore County, eastern Oklahoma, USA
Ceratoikiscum herkommeri	Al	–	–	Schwartzapfel & Holdsworth 1996: 117	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Ceratoikiscum hexaspina	Al	–	–	Won 1990: 133	Lower Carboniferous	Visean	Riescheid Section, Wuppertal-Barmen, Germany
Ceratoikiscum hexastellatum	Al	–	–	Cheng 1986: 81	Upper Devonian	Famennian	Johns Valley Shale, Ouachita Mountains, eastern Oklahoma, USA
Ceratoikiscum ichinotaniense	Al	–	–	Ishiga 1992: 395	Upper Silurian	Pridoli	Yoshiki Formation, Hida-gaien Belt, Ichinotani Valley, Fukuji area, Takayama City, Gifu, Japan
Ceratoikiscum incomptum	Al	–	–	Nazarov 1975: 103	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Ceratoikiscum izumiensis	Al	–	–	Kurihara & Sashida 2000: 64	Lower Devonian	Emsian	Shibasudani Formation, Shibasudani Valley, Ohno City, Fukui Prefecture, Japan
Ceratoikiscum jucundum	Al	–	–	Noble, Tekin, Gedik & Pehlivan 2008: 46	Lower Carboniferous	Tournaisian	Baltalimani Formation, Istanbul, Turkey
Ceratoikiscum kochiense	Al	–	–	Umeda 1997: 419	Upper Silurian	Pridoli	Jyoru Formation, Kurosegawa Belt, Mt. Konomori, Kochi City, Shikoku, Japan
Ceratoikiscum konomoriense	Al	–	–	Ishiga 1988: 75	Upper Devonian	middle Frasnian	Jyoru Formation, Kurosegawa Belt, Konomori section, Kochi City, Shikoku, Japan
Ceratoikiscum kurosegum	Al	–	–	Aitchison, Hada, Ireland & Yoshikura 1996: 59	Upper Silurian	Pridoli	Unit G4, Jingamori, Kurosegawa terrane, S Mt. Konomori, Kochi City, Shikoku, Japan
Ceratoikiscum labyrintheum	Al	–	–	Cheng 1986: 82	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Ceratoikiscum lorum	Al	–	–	Holdsworth 1969: 224	Upper Carboniferous	Bashkirian	Upper Dove Valley, SW Derbyshire, England, UK
Ceratoikiscum lyratum	Al	–	–	Ishiga 1988: 74	Upper Devonian	middle Frasnian	Jyoru Formation, Kurosegawa Belt, Konomori section, Kochi City, Shikoku, Japan
Ceratoikiscum marginatum	Al	–	–	Aitchison 1993b: 109	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Ceratoikiscum mertsi	Al	–	–	Vishnevskaya 1998: 65	Upper Devonian	Frasnian	Domanik Formation, Uktha section, Domanik creek, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Ceratoikiscum* (11) continuation**							
Ceratoikiscum mirum	Al	–	–	Cheng 1986: 83	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Ceratoikiscum neosurculum	Al	–	–	Won & Seo 2010: 245	Lower Carboniferous	Visean	Bergisches Land, N Westfalia, Germany
Ceratoikiscum omicron	Al	–	–	Ormiston & Lane 1976: 172	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Ceratoikiscum orbistellerae	Al	–	–	Nazarov 1975: 100	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Ceratoikiscum paragyium	Al	–	–	Stratford & Aitchison 1997: 244	Middle Devonian	Eifelian	Gamilaroi terrane, Glenrock Station, New England orogen, NSW, Australia
Ceratoikiscum patagiatum	Al	–	–	Aitchison 1993b: 110	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Ceratoikiscum perittacanthinum	Al	–	–	Foreman 1963: 292	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Ceratoikiscum pillaraense	Al	–	–	Aitchison 1993b: 110	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Ceratoikiscum planistellare	Al	–	–	Foreman 1963: 290	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Ceratoikiscum quinquestellatum	Al	–	–	Cheng 1986: 82	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Ceratoikiscum rectum	Al	–	–	Nazarov 1973a: 698	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Ceratoikiscum rectum	Al	–	–	Nazarov 1975: 102	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Ceratoikiscum regalinodus	Al	–	–	Stratford & Aitchison 1997: 244	Middle Devonian	Eifelian	Gamilaroi terrane, Glenrock Station, New England orogen, NSW, Australia
Ceratoikiscum riedeli	Al	–	–	Cheng 1986: 84	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Ceratoikiscum robustum	Al	–	–	Aitchison 1993b: 110	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Ceratoikiscum rotundum	Al	–	–	Braun 1990: 97	Lower Carboniferous	upper Tournaisian	Rheinisches Schiefergebirge, Frankenwald, Germany
Ceratoikiscum sandbergi	Al	–	–	Cheng 1986: 84	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Ceratoikiscum simplum	Al	–	–	Cheng 1986: 85	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Ceratoikiscum spiculatum	Al	–	–	Aitchison 1993b: 111	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Ceratoikiscum spinosiarcuatum	Al	–	–	Foreman 1963: 294	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Ceratoikiscum spinosum	Al	–	–	Cheng 1986: 85	Lower Carboniferous	Bashkirian	Jones Valley Shale, Le Flore County, eastern Oklahoma, USA
Ceratoikiscum stellatum	Al	–	–	Aitchison 1993b: 111	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Ceratoikiscum surculum	Al	–	–	Schwartzapfel & Holdsworth 1996: 99	Upper Devonian	upper Famennian	Woodford Formation, Criner Hills 2A section, Carter County, Oklahoma, USA
Ceratoikiscum torale	Al	–	–	Aitchison 1993b: 111	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Ceratoikiscum triactina	Al	–	–	Park & Won 2012: 47	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Ceratoikiscum triangulatum	Al	–	–	Holdsworth 1969: 226	Upper Carboniferous	Bashkirian	Upper Dove Valley, SW Derbyshire, England, UK

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Ceratoikiscum* (11) continuation**							
Ceratoikiscum tricancellatum	Al	–	–	Holdsworth 1969: 225	Upper Carboniferous	Bashkirian	Upper Dove Valley, SW Derbyshire, England, UK
Ceratoikiscum turgidum	Al	–	–	Umeda 1998a: 98	Middle Devonian	Eifelian	Nakahata Formation, Section B, Ochi Town, Shikoku, Japan
Ceratoikiscum ukhtensis	Al	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, outcrop 1904, Lyaiol River, Timan-Pechora Basin, Russia
Ceratoikiscum ukhtensis	Al	–	–	Afanasieva 2000c: 367	Upper Devonian	middle Frasnian	Domanik Formation, outcrop 1904, Lyaiol River, Timan-Pechora Basin, Russia
Ceratoikiscum umbraculum	Al	–	–	Won 1983: 139	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Ceratoikiscum umbraculum bisulcatum	Al	–	–	Braun 1989: 86	Lower Carboniferous	upper Tournaisian	Pebbles of siliceous shale from the lower Main-valley near Frankfurt a. M., Germany
Ceratoikiscum vimenum	Al	–	–	Nazarov & Ormiston 1983a: 462	Upper Devonian	Frasnian	Sadler Range, SE Cap Creek Gap, Canning Basin, Western Australia
Ceratoikiscum vimineum	Al	–	–	Wakamatsu, Sugiyama & Furutani 1990: 179	Lower Devonian	Emsian	Nakahata Formation, SW of Mt. Yokokurayama, Ochi Town, Shikoku, Japan
Ceratoikiscum wonae	Al	–	–	Cheng 1986: 86	Upper Carboniferous	Bashkirian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA
Ceratoikiscum xinjangense	Al	–	–	Liu 1992: 130	Upper Carboniferous	Bashkirian	Houxia Formation, Ewirgol-Houxia districts of Ulumuqi, Xinjiang, China
Ceratoikiscum? *acantangulatum*	Al	–	–	Nazarov *in* Nazarov *et al.* 1975: 103	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Ceratoikiscum? *apertum*	Al	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Ceratoikiscum? *evolutum*	Al	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Ceratoikiscum? *reductum*	Al	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Ceratoikiscum? *speciosum*	Al	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
***Cessipylorum* (256)**							
Cessipylorum admirandum	E	n.n.	–	Nazarov 1988: 122	Upper Silurian	Pridoli	Maksyutov Complex, Tarangul River, 10 km N of Kosistek Village, S Urals, Russia
Cessipylorum robuspinatum	E	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Choenicosphaera							
Choenicosphaera brevispina	–	n.d.	–	Ruedemann & Wilson 1936: 1568	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Choenicosphaera multispoinosa	–	n.d.	–	Ruedemann & Wilson 1936: 1568	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
***Circulaforma* (12)**							
Circulaforma admissarius	Al	–	–	Stratford & Aitchison 1997: 245	Lower Devonian	Emsian	Gamilaroi terrane, Glenrock Station, New England orogen, NSW, Australia
Circulaforma annula	Al	–	–	Won & Seo 2010: 246	Lower Carboniferous	Visean	Bergisches Land, N Westfalia, Germany
Circulaforma davidi	Al	–	–	Aitchison *et al.* 1999: 158	Lower Devonian	Emsian	Gamilaroi terrane, Glenrock Station, New England orogen, NSW, Australia
Circulaforma delicata	Al	–	T	Cheng 1986: 87	Lower Carboniferous	Serpukhovian	Sand Branch Member of Caney Formation, Pittsburg County, Oklahoma, USA
Circulaforma oilensis	Al	–	–	Schwartzapfel & Holdsworth 1996: 122	Lower Carboniferous	Serpukhovian	Goddard Formation, Oil Creek section, Johnston County, Oklahoma, USA
Circulaforma robusta	Al	–	–	Cheng 1986: 89	Upper Carboniferous	Bashkirian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
Clavata							
Clavata lancangensis	–	n.d.	–	Feng 1992: 57	Upper Permian	Changhsingian	Muyinhe Formation, Nanpan, Lancang County, Yunnan, China
Clavata lancangensis	–	n.n.	–	Feng & Liu 1993: 545	Upper Permian	Changhsingian	Muyinhe Formation, Nanpan, Lancang County, Yunnan, China
***Copiconulus* (293)**							
Copiconulus acanthicus	IS (O&F)	–	–	Feng *in* Feng *et al.* 2006a: 31	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Copiconulus solidus	IS (O&F)	–	T	Feng *in* Feng *et al.* 2006a: 31	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Copicyntra* (239)**							
Copicyntra acilaxa	S	–	T	Nazarov *in* Isakova & Nazarov 1986: 70	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Copicyntra acilaxa trigona	S	–	–	Nazarov *in* Isakova & Nazarov 1986: 71	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Copicyntra acilongata	S	–	–	Nazarov *in* Isakova & Nazarov 1986: 71	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Copicyntra akikawaensis	S	–	–	Sashida & Tonishi 1988: 530	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Copicyntra brevidentata	S	–	–	Kozur & Mostler 1989: 217	Lower Permian	Kungurian	Koshelev Foramtion, Alogazovo Village, Movsovic Region, Russia
Copicyntra cuspidata	S	–	–	Nazarov & Ormiston 1985: 25	Lower Permian	Artinskian	Aktastyi River, Orenburgskaya region, Southern Urals, Russia
Copicyntra erinacea	S	–	–	Nestell & Nestell 2010: 24	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Copicyntra fragilispinosa	S	–	–	Kozur & Mostler 1989: 217	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Copicyntra irregulata	S	–	–	Maldonado & Noble 2010: 100	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Copicyntra leviuscula	S	–	–	Amon & Braun 1994: 5	Lower Permian	Artinskian	Burtsevesky horizon, Dalny Tulkas Rill, Bashkortostan Region, S Urals, Russia
Copicyntra multispinosa	S	–	–	Kozur & Mostler 1989: 217	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Copicyntra phymatodonta	S	–	–	Nazarov & Ormiston 1985: 25	Lower Permian	Artinskian	Aktastyi River, Orenburgskaya region, Southern Urals, Russia
Copicyntra robustodentata	S	–	–	Kozur & Mostler 1989: 217	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Copicyntra ruzhencevi	S	–	–	Kozur & Mostler 1989: 218	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Copicyntra ruzhencevi gracilispinosa	S	–	–	Kozur & Mostler 1989: 218	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Copicyntra ruzhencevi ruzhencevi	S	–	–	Kozur & Mostler 1989: 218	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Copicyntra shaiwaensis	S	–	Ts	Wang *in* Wang & Shang 2001: 118	Upper Permian	Wuchiapingian	Shaiwa Group, Shaiwa, Ziyun County, Guizhou, China
Copicyntra spinosa	S	–	–	Maldonado & Noble 2010: 100	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Copicyntra tongi	S	–	–	Gui & Feng *in* Gui *et al.* 2009: 804	Upper Permian	Changhsingian	Dalong Formation, Pingdingshan section, N Chaou, Anhui Region, China
Copicyntra ziyunensis	S	–	T	Feng & Gu 2002: 803	Upper Permian	Changhsingian	Qiaoma Formation, Shaiwa section, Ziyun County, Guizou, China
Copicyntra? *nuda*	S	–	–	Wakamatsu, Sugiyama & Furutani 1990: 169	Upper Silurian	Pridoli	Jyoru Formation, Kurosegawa Belt,, S Mt. Yokokurayama, Ochi Town, Shikoku, Japan
Copicyntra? *simulens*	S	–	–	Nazarov & Ormiston 1985: 25	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Copicyntroides* (240)**							
Copicyntroides asteriformis	S	–	T	Nazarov & Ormiston 1985: 27	Middle Permian	Roadian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Copicyntroides nazarovi	S	–	–	Maldonado & Noble 2010: 108	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Copicyntroides parvulus	S	–	–	Feng *in* Feng *et al.* 2006a: 39	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Copicyntroides stellatus	S	–	–	He & Feng *in* He *et al.* 2011: 486	Upper Permian	Changhsingian	Talung Formation, Hushan section, Nanjing, Jiangsu Region, China
***Copiellintra* (241)**							
Copiellintra bispina	S	–	–	Nazarov & Afanasieva *in* Afanasieva 2000c: 91	Lower Permian	Sakmarian	station 13, Karachaganak area, Batys Qazaqstan, Kazakhstan
Copiellintra diploacantha	S	–	T	Nazarov & Ormiston 1985: 26	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Copiellintra elongata	S	–	–	Feng *in* Feng *et al.* 2006a: 37	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Copiellintra fastuosa	S	–	–	Nestell & Nestell 2010: 27	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Copiellintra ferula	S	–	–	Noble & Jin 2010: 134	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts., Culberson County, W Texas, USA
Copiellintra laurelae	S	–	–	Noble & Jin 2010: 134	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts., Culberson County, W Texas, USA
Copiellintra orbiculata	S	–	–	Nestell & Nestell 2010: 26	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
***Cornellus* (189)**							
Cornellus sakmaraensis	L	–	Ts	Kozur & Mostler 1989: 212	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
***Cornum* (278)**							
Cornum mittereri	IS	–	T	Schwartzapfel & Holdsworth 1996: 246	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Cornum mullerae	IS	–	–	Schwartzapfel & Holdsworth 1996: 238	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Cornum olssonae	IS	–	–	Schwartzapfel & Holdsworth 1996: 242	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Cornum repetskii	IS	–	–	Schwartzapfel & Holdsworth 1996: 232	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Phillips Creek Section, Carter County, Oklahoma, USA
Cornutanna							
Cornutanna dilatata	–	n.d.	–	Rüst 1892: 180	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Cornutanna macropora	–	n.d.	–	Rüst 1892: 180	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
***Corythoecia* (279)**							
Corythoecia dichoptera	IS	–	T	Foreman 1963: 298	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Corythoecia loxosegmentata	IS	–	–	Nazarov *in* Isakova & Nazarov 1986: 119	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
***Costaentactinia* (86)**							
Costaentactinia delicata	E	–	–	Won & Seo 2010: 247	Lower Carboniferous	Visean	Bergisches Land, N Westfalia, Germany
Costaentactinia foremanae	E	–	T	Seo & Won 2009: 67	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Cowheadia* (281)**							
Cowheadia duplextesta	IS	–	T	Won, Iams & Reed 2007: 535	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Cromyodruppa							
Cromyodruppa prunulina	–	n.d.	–	Rüst 1892: 157	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Cromyomma							
Cromyomma grandaevum	–	n.d.	–	Rüst 1892: 149	Lower Silurian	–	Cabrières, Hérault, France
Cromyosphaera							
Cromyosphaera alternans	–	n.d.	–	Rüst 1892: 139	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Cromyosphaera distans	–	n.d.	–	Rüst 1892: 139	Lower Devonian	–	Southern Urals, Russia
Cromyosphaera eminens	–	n.d.	–	Rüst 1892: 139	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Cromyosphaera frequens	–	n.d.	–	Rüst 1892: 138	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Cromyosphaera petschorae	–	n.d.	–	Rüst 1892: 138	Lower Devonian	–	Southern Urals, Russia
Cromyosphaera prisca	–	n.d.	–	Rüst 1892: 138	Lower Silurian	–	Cabrières, Hérault, France
Cromyosphaera radiata	–	n.d.	–	Rüst 1892: 138	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Cromyosphaera rotiforme	–	n.d.	–	Pulfrey 1932: 194	Lower Carboniferous	Serpukhovian	Calver Sough, Derbyshire, England, UK
***Cromyostylus*?**							
Cromyostylus? variabilis	E	–	Ts	Ormiston & Lane 1976: 170	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Crucidiscus							
Crucidiscus praecursor	–	n.d.	–	Rüst 1892: 163	Lower Silurian	–	Cabrières, Hérault, France
Cubaxonium							
Cubaxonium antiquorum	S?	–	–	Sheng & Wang 1982: 60	Middle Devonian	Givetian	Qizigiao Formation, Matangwuo, Xintian district, Hunan, China
Cubaxonium? octaedrospongiosum	S?	–	–	Won 1983: 139	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Cubosphaera							
Cubosphaera significans	–	n.d.	–	Deflandre & Deflandre-Rigaud 1958: 969	Lower Carboniferous	Visean	Cabrières, Hérault, France
***Curvechidnina* (52)**							
Curvechidnina fusa	Ar	–	–	Won & Iams 2002: 23	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Curvechidnina kozuri	Ar	–	–	Won & Iams 2002: 23	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Curvechidnina longispinosa	Ar	–	–	Won & Iams 2002: 24	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Curvechidnina multiramosa	Ar	–	–	Won, Iams & Reed 2005: 446	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Curvechidnina tetractina	Ar	–	T	Won & Iams 2002: 24	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
***Cyclocarpus* (87)**							
Cyclocarpus tubiformis	E	–	Tn	Li & Wang 1991: 398	Upper Devonian	Frasnian	Liukiang Formation, Etang section, Hexian County, Guangxi, China
Cyphanta							
Cyphanta piscis	–	n.d.	–	Rüst 1892: 160	Lower Devonian	–	Southern Urals, Russia
Cyphanta quiniseriata	–	n.d.	–	Rüst 1892: 161	Lower Devonian	–	Southern Urals, Russia
***Cyrtentactinia* (229)**							
Cyrtentactinia cibdelosphaera	N?	–	T	Foreman 1963: 285	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Cyrtentactinia foremanae	N?	–	–	Cheng 1986: 160	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Cyrtentactinia* (229) continuation**							
Cyrtentactinia formosa	N?	–	–	Cheng 1986: 161	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Cyrtentactinia macrocephala	N?	–	–	Cheng 1986: 161	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Cyrtentactinia pessagnoi	N?	–	–	Schwartzapfel & Holdsworth 1996: 141	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Cyrtentactinia petrushevskayae	N?	–	–	Cheng 1986: 162	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Cyrtentactinia primotica	N?	–	T	Foreman 1963: 285	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Cyrtentactinia splendida	N?	–	–	Cheng 1986: 162	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
***Cyrtisphaeractenium* (222)**							
Cyrtisphaeractenium crassum	N?	–	–	Cheng 1986: 130	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Cyrtisphaeractenium delicatum	N?	–	–	Cheng 1986: 131	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Cyrtisphaeractenium mendax	N?	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Cyrtisphaeractenium mendax	N?	–	–	Deflandre 1972a: 3538	Lower Carboniferous	Visean	Cabrières, Hérault, France
Cyrtisphaeractenium mendax	N?	–	T	Deflandre 1972b: 15	Lower Carboniferous	Visean	Cabrières, Hérault, France
Cyrtisphaeractenium rurae	N?	–	–	Won 1983: 140	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Cyrtisphaeractenium sandbergi	N?	–	–	Schwartzapfel & Holdsworth 1996: 170	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Cyrtisphaeractenium shengi	N?	–	–	Cheng 1986: 132	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Cyrtisphaeractenium spinosum	N?	–	–	Cheng 1986: 133	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Cyrtisphaeractenium? fluegeli	N?	–	–	Kiessling & Tragelehn 1994: 232	Upper Devonian	Famennian	Frankenwald, north Bavaria, Germany
***Cyrtisphaeronemium* (223)**							
Cyrtisphaeronemium prudentigerum	N?	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Cyrtisphaeronemium prudentigerum	N?	–	–	Deflandre 1972a: 3538	Lower Carboniferous	Visean	Cabrières, Hérault, France
Cyrtisphaeronemium prudentigerum	N?	–	T	Deflandre 1972b: 14	Lower Carboniferous	Visean	Cabrières, Hérault, France
Cyrtocalpis							
Cyrtocalpis obtusa	–	n.d.	–	Rüst 1892: 180	Lower Devonian	–	Southern Urals, Russia
Cyrtocalpis prima	–	n.d.	–	Rüst 1892: 180	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Cyrtocalpis serieporata	–	n.d.	–	Rüst 1892: 180	Lower Devonian	–	Southern Urals, Russia
***Deflandrella* (171)**							
Deflandrella manica	L	–	T, Ts, Th	De Wever & Caridroit 1984: 99	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
***Deflandrellium* (224)**							
Deflandrellium georgesi	N?	–	T	Cheng 1986: 134	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Deflandrellium minutum	N?	–	–	Cheng 1986: 135	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Deflandrellium pronum	N?	–	–	Cheng 1986: 135	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Deflantrica* (142)**							
Deflantrica furutanii	E	–	–	Kurihara & Sashida 2000: 60	Lower Devonian	Emsian	Shibasudani Formation, Shibasudani Valley, Ohno City, Fukui Prefecture, Japan
Deflantrica solidum	E	–	–	Wakamatsu, Sugiyama & Furutani 1990: 168	Lower Devonian	Pragian	Jyoru Formation, Kurosegawa Belt, Konomori area, Kochi City, Shikoku, Japan
***Devoniglansus* (242)**							
Devoniglansus brachiatus	S	–	–	Umeda 1998b: 205	Upper Silurian	Pridoli	Mt. Yokokurayama area, Kochi Prefecture, Japan
Devoniglansus unicus	S	–	T	Wakamatsu, Sugiyama & Furutani 1990: 172	Upper Silurian	Pridoli	Jyoru Formation, Kurosegawa Belt,, S Mt. Yokokurayama, Ochi Town, Shikoku, Japan
Dictyocephalus							
Dictyocephalus ventricosus	–	n.d.	–	Rüst 1892: 182	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Dictyomitra							
Dictyomitra magnifica	–	n.d.	–	Rüst 1892: 188	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Dictyomitra micropora	–	n.d.	–	Rüst 1892: 188	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Dictyomitra pumilio	–	n.d.	–	Rüst 1892: 187	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Dictyophimus							
Dictyophimus dubius	–	n.d.	–	Rüst 1892: 181	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
***Diparvapila* (69)**							
Diparvapila hicocki	Ar	–	T	MacDonald 1998: 595	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Diparvapila larseni	Ar	–	–	MacDonald 1998: 595	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Diparvapila pygmaea	Ar	–	–	Won, Blodgett & Nestor 2002: 957	Lower Silurian	Telychian	Road River Formation, subsidiary channel of Tatonduck River, east-central Alaska, USA
Diparvapila saintrochae	Ar	–	–	MacDonald 1998: 595	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
***Diploplegma* (308)**							
Diploplegma cinctum	–	n.d.	Td	Hinde 1890: 48	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Diploplegma? schonensis	–	n.d.	–	Hinz-Schallreuter & Schallreuter 2003: 82	Upper Ordovician	Katian	Gislövshammar, Scania, Sweden
Distospicula							
Distospicula delicata	n.r.	i.s.	Tnr	Wang 1989: 146	Lower Cambrian	–	Niutitang Formation, Sandu district, Guizhou Province, China
Distospicula vigorum	n.r.	i.s.	–	Wang 1989: 146	Lower Cambrian	–	Damiao Formation, Erlongping Group, Eastern Qinling ophiolite belt, Henan Province, China
Distriactis							
Distriactis vetusta	E	n.d.	–	Hinde 1899a: 53	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Dizonium							
Dizonium laeve	–	n.d.	–	Rüst 1892: 174	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
***Dorydictyum* (309)**							
Dorydictyum magnum	–	n.d.	–	Ruedemann & Wilson 1936: 1574	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Dorydictyum minutum	–	n.d.	–	Ruedemann & Wilson 1936: 1574	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Dorydictyum simplex	–	n.d.	Td	Hinde 1890: 54	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
Dorylonchidium							
Dorylonchidium antiquum	–	n.n.	–	Deflandre 1953: 391	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
***Doryplegma* (310)**							
Doryplegma armatum	–	n.d.	–	Ruedemann & Wilson 1936: 1575	Lower Ordovician	Floian	Normanskill chert, Fly Summit, Washington County, New York, USA
Doryplegma gracile	–	n.d.	–	Hinde 1890: 54	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Doryplegma nasutum	–	n.d.	Td	Hinde 1890: 53	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Doryplegma nux	–	n.d.	–	Ruedemann & Wilson 1936: 1575	Lower Ordovician	Floian	Normanskill chert, Ghent, Columbia County, New York, USA
Doryplegma priscum	–	n.d.	–	Ruedemann & Wilson 1936: 1574	Lower Ordovician	Floian	Normanskill chert, Glenmont, Albany County, New York, USA
***Dorysphaera* (311)**							
Dorysphaera domanicensis	–	n.d.	–	Bykova 1955: 68	Upper Devonian	Frasnian	Domanik Formation, Tatarstan, Russia
Dorysphaera echinata	–	n.d.	–	Hinde 1899a: 45	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Dorysphaera laxa	–	n.d.	–	Hinde 1890: 53	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Dorysphaera nucula	–	n.d.	–	Hinde 1890: 53	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Dorysphaera reticulata	–	n.d.	Td	Hinde 1890: 52	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
***Druppalonche* (88)**							
Druppalonche clavigera	E	–	Ts	Hinde 1899b: 217	Middle Devonian	Givetian	Chypons Farm, Mullion Parrish, Cornwall, England, UK
Druppalonche ovata	E	–	–	Hinde 1899b: 218	Middle Devonian	Givetian	Chypons Farm, Mullion Parrish, Cornwall, England, UK
Druppatractus							
Druppatractus dictyococcus	–	n.d.	–	Rüst 1892: 158	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Druppula							
Druppula amygdalina	–	n.d.	–	Rüst 1892: 155	Lower Devonian	–	Southern Urals, Russia
Druppula andreana	–	n.d.	–	Rüst 1892: 155	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Druppula angustiporata	–	n.d.	–	Rüst 1892: 156	Carboniferous	–	Bükk-Gebirge, Inner Western Carpathians, Hungary
Druppula berberis	–	n.d.	–	Rüst 1892: 156	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Druppula cembra	–	n.d.	–	Rüst 1892: 155	Lower Devonian	–	Southern Urals, Russia
Druppula cornus	–	n.d.	–	Rüst 1892: 156	Carboniferous	–	Bükk-Gebirge, Inner Western Carpathians, Hungary
Druppula crucifera	–	n.d.	–	Rüst 1892: 156	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Druppula endechinata	–	n.d.	–	Rüst 1892: 155	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Druppula fixata	–	n.d.	–	Rüst 1892: 156	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Druppula silurica	–	n.d.	–	Rüst 1892: 154	Lower Silurian	–	Cabrières, Hérault, France
Druppula simplex	–	n.d.	–	Ruedemann & Wilson 1936: 1576	Lower Ordovician	Floian	Normanskill chert, Flint Mine Hill, Columbia County, New York, USA
***Duodecimentactinia* (89)**							
Duodecimentactinia ampla	E	–	–	Won 1997b: 377	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Duodecimentactinia aranea	E	–	T	Won 1997b: 378	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Duodecimentactinia media	E	–	–	Won 1997b: 378	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Duosphaera* (90)**							
Duosphaera hebes	E	–	–	Park & Won 2012: 55	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
***Duplexia* (312)**							
Duplexia spinocurva	E?	n.d.	–	Afanasieva 2000a: 62	Upper Devonian	Famennian	Zadonsk Formation, W Lekkeyaginsk-65, Saremboi-Lekkeyaga, Timan-Pechora Basin, Russia
Duplexia? parviperforata	E?	n.d.	–	Won 1990: 134	Lower Carboniferous	Visean	Riescheid Section, Wuppertal-Barmen, Germany
***Durahelenifore* (13)**							
Durahelenifore robustum	Al	–	Ts	Boundy-Sanders & Murchey *in* Boundy-Sanders *et al.* 1999: 64	Upper Devonian	upper Famennian	Slaven Chert, Northern Shoshone Range, Roberts Mountains Allochthon, Nevada, USA
Dystympanium							
Dystympanium carbonicum	–	n.d.	–	Rüst 1892: 177	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
***Echidnina* (53)**							
Echidnina bengtsoni	Ar	–	–	Kozur, Mostler & Repetski 1996: 249	Lower Ordovician	Tremadocian	Windfall Formation, Antelope Range, Eureka County, Nevada, USA
Echidnina conexa	Ar	–	–	Won, Iams & Reed 2005: 447	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Echidnina conjuncta	Ar	–	–	Won & Iams 2002: 25	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Echidnina curvata	Ar	–	–	Won & Iams 2002: 25	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Echidnina irregularis	Ar	–	–	Won & Iams 2002: 25	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Echidnina laxa	Ar	–	–	Won, Iams & Reed 2005: 447	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Echidnina runnegari	Ar	–	T	Bengtson 1986: 202	Upper Cambrian	Paibian	Mungerebar Limestone, Georgina Basin, Queensland, Australia
Echidnina semiconexa	Ar	–	–	Won, Iams & Reed 2005: 447	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Echidnina severedeformis	Ar	–	–	Won, Iams & Reed 2005: 449	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Echidnina? immanis	Ar	–	–	Won, Iams & Reed 2005: 449	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Echidnina? monactina	Ar	–	–	Won & Iams 2002: 26	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Echidnina? stevensi	Ar	–	–	Won & Iams 2002: 26	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Echinomma							
Echinomma oligacanthum	–	n.d.	–	Rüst 1892: 149	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
***Ectoactinia* (313)**							
Ectoactinia tulufanensis	–	n.d.	Td	Liu 1992: 130	Upper Carboniferous	Bashkirian	Houxia Formation, Ewirgol-Houxia districts of Ulumuqi, Xinjiang, China
***Ehrenbergia* (314)**							
Ehrenbergia baijingensis	–	n.d.	Td	Li 1995: 335	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Ellipsidium							
Ellipsidium aculeatum	–	n.d.	–	Rüst 1892: 152	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Ellipsidium castanea	–	n.d.	–	Hinde 1899a: 51	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Ellipsidium spinosum	–	n.d.	–	Rüst 1892: 153	Lower Carboniferous	–	Kieselschiefer, Harz, Germany

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Ellipsocopicyntra* (243)**							
Ellipsocopicyntra acantha	S	–	–	Feng *in* Feng *et al.* 2006a: 33	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Ellipsocopicyntra oviformis	S	–	T	Kozur & Mostler 1989: 218	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Ellipsocopicyntra sakmaraensis	S	–	–	Kozur & Mostler 1989: 219	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Ellipsocopicyntra wani	S	–	–	Feng *in* Feng *et al.* 2006a: 33	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Ellipsostigma* (163)**							
Ellipsostigma australe	E	n.d.	Td	Hinde 1899a: 51	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Ellipsostylus							
Ellipsostylus obliquus	–	n.d.	–	Rüst 1892: 153	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Ellipsoxiphus							
Ellipsoxiphus hystrix	–	n.d.	–	Rüst 1892: 153	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Ellipsoxiphus procerus	–	n.d.	–	Rüst 1892: 153	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
***Entactinia* (91)**							
Entactinia akdymensis	E	–	–	Nazarov 1975: 53	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Entactinia americana	E	–	–	Park & Won 2012: 51	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Entactinia aperticuva	E	–	–	Aitchison 1993b: 112	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinia atypica	E	–	–	Nazarov 1975: 53	Upper Cambrian	Furongian	Burudaytal'sk Formation, SW Pribalkhash, Kazakhstan
Entactinia austrouralica	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 64	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Entactinia bella	E	–	–	Afanasieva & Amon 2011: 1498	Upper Devonian	Frasnian	Polar Urals, Palnik Yu River, Russia
Entactinia bifida	E	–	–	Afanasieva 2000c: 369	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Entactinia bogdanovi	E	–	–	Afanasieva 2000c: 371	Upper Devonian	middle Frasnian	Domanik Formation, borehole Ukhtinskaya-3B, SW of Uktha, Timan-Pechora Basin, Russia
Entactinia carbonica	E	–	–	Liu 1992: 128	Upper Carboniferous	Bashkirian	Houxia Formation, Ewirgol-Houxia districts of Ulumuqi, Xinjiang, China
Entactinia cometes	E	–	–	Foreman 1963: 271	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia complanata	E	–	–	Nazarov 1975: 56	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Entactinia complanata	E	–	–	Nazarov *in* Nazarov *et al.* 1977: 917	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Entactinia consociata	E	–	–	Nazarov 1975: 50	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Entactinia crustescens	E	–	–	Foreman 1963: 272	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia dasysa	E	–	–	Nazarov *in* Nazarov & Popov 1976: 408	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Entactinia densa	E	–	–	Won 1998: 236	Lower Carboniferous	Tournaisian	Oese, Rheinische Schiefergebirge, Germany
Entactinia densissima	E	–	–	Nazarov & Ormiston 1985: 18	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Entactinia* (91) continuation**							
Entactinia dianae	E	–	–	Nestell, Pope & Nestell 2012: 236	Upper Carboniferous	Moscovian	Mouse Creek Formation, Excello Shale Member, south-central Iowa, USA
Entactinia dimidiata	E	–	–	Nazarov 1975: 48	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Entactinia dissora	E	–	–	Nazarov 1975: 48	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Entactinia diversita	E	–	–	Nazarov 1973a: 697	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Entactinia dolichoacus	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 62	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Entactinia dolichoacus dolichoacus	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 63	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Entactinia dolichoacus praematura	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 63	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Entactinia duksundiensis	E	–	–	Nazarov *in* Nazarov *et al.* 1981: 82	Upper Devonian	Famennian	Duksundinsk Formation, along Duksunda River, Magadan, Russia
Entactinia eiklaensis	E	–	–	Nazarov *in* Nazarov & Nolvak 1983: 4	Upper Ordovician	Hirnantian	Sau'yask Formation, Bore hole Eikla, Saaremaa, Estonia
Entactinia elongata	E	–	–	Nazarov 1975: 55	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Entactinia exilispina	E	–	–	Foreman 1963: 273	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia faceta	E	–	–	Amon, Braun & Chuvashov 1990: 121	Lower Permian	Artinskian	Shelyvaginsk Formation, around Sim Town, Chalyabinskaya region, Urals, Russia
Entactinia foveolata	E	–	–	Nazarov 1975: 51	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Entactinia gogoense	E	–	–	Aitchison 1993b: 112	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinia haeckeliana	E	–	–	Won 1997a: 347	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinia herculea	E	–	T	Foreman 1963: 271	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia hindeiana	E	–	–	Won 1997a: 348	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinia hirsuta	E	–	–	Nazarov *in* Nazarov & Popov 1980: 33	Middle Ordovician	Darriwilian	Kizyilzarsk Formation, area between Moyynty and Zhamishinsk Rivers, Kazakhstan
Entactinia hoxtolgayensis	E	–	–	Wang 1997: 152	Upper Devonian	Famennian	Gennaren Formation, S Utubulak, NW Jungar Basin, Xinjiang, China
Entactinia hystricuosa	E	–		Aitchison 1993b: 113	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinia iriensis	E	–	–	Nazarov *in* Nazarov & Shkolnik 1974: 108	Middle Cambrian	–	Dzhagdish, between Nim and Dzharovdik River, Khabarovsk, Russia
Entactinia itsukaichiensis	E	–	–	Sashida & Tonishi 1985: 9	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Entactinia leptura	E	–	–	Goto, Umeda & Ishiga 1992: 153	Upper Devonian	upper Frasnian	Malongulli Formation, Lachlan Fold Belt, eastern NSW, Australia
Entactinia mediforma	E	–	–	Won 1997a: 348	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinia meishanensis	E	–	–	He, Feng & Gu 2005: 210	Upper Permian	Changhsingian	Changxing Formation, Meishan D section, Changxing, Zhejiang, China
Entactinia micropora	E	–	–	Goto, Umeda & Ishiga 1992: 153	Upper Ordovician	Katian	Malongulli Formation, Lachlan Fold Belt, 30 km NW of Taralga, NSW, Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Entactinia* (91) continuation**							
Entactinia micula	E	–	–	Foreman 1963: 272	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia minuta	E	–	–	Feng *in* Feng *et al.* 2007: 23	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Entactinia mixta	E	–	–	Park & Won 2012: 51	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Entactinia modesta	E	–	–	Goto, Umeda & Ishiga 1992: 151	Upper Devonian	upper Famennian	Malongulli Formation, Lachlan Fold Belt, eastern NSW, Australia
Entactinia modesta	E	–	–	Sashida & Tonishi 1985: 10	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Entactinia monalloea	E	–	–	Foreman 1963: 273	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia octaparvispina	E	–	–	Won 1990: 137	Lower Carboniferous	Visean	Riescheid Section, Wuppertal-Barmen, Germany
Entactinia octaradiata	E	–	–	Won 1997a: 349	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinia ormistoni	E	–	–	Won 1983: 142	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Entactinia oumonhaoensis	E	–	–	Wang 1997: 152	Upper Devonian	Famennian	Gennaren Formation, S Utubulak, NW Jungar Basin, Xinjiang, China
Entactinia pantosompha	E	–	–	Foreman 1963: 273	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia parapycnoclada	E	–	–	Nazarov & Ormiston 1985: 19	Middle Permian	Roadian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Entactinia parva	E	–	–	Won 1983: 143	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Entactinia parviporosa	E	–	–	Won 1990: 136	Lower Carboniferous	Visean	Riescheid Section, Wuppertal-Barmen, Germany
Entactinia patorovaria	E	–	–	Afanasieva 2000a: 43	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Entactinia paula	E	–	–	Foreman 1963: 271	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia perplexa	E	–	–	Nazarov *in* Zhuravleva 1975: 55	Upper Cambrian	Furongian	Dzhagdy River area, Khabarovsk, Russia
Entactinia pillaraense	E	–	–	Aitchison 1993b: 113	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinia pinrasensis	E	–	–	Afanasieva & Amon 2016: 216	Lower Permian	Artinskian	Northern Mugodzhary, Aktasty River, Kazakhstan
Entactinia postadditiva	E	–	–	Nazarov & Ormiston 1993: 32	Upper Carboniferous	Moscovian	Nyatvinsk Formation, Popovka River, Prikolyma Region, Magadan Region, NE Russia
Entactinia praenuntia	E	–	–	Nazarov & Ormiston 1993: 30	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Entactinia praenuntia	–	n.n.	–	Nazarov 1988: 190	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Entactinia praepycnoclada	E	–	–	Nazarov & Ormiston 1993: 32	Upper Carboniferous	Moscovian	Nyatvinsk Formation, Popovka River, Prikolyma Region, Magadan Region, NE Russia
Entactinia praepycnoclada	–	n.n.	–	Nazarov 1988: 191	Upper Carboniferous	Moscovian	Popovka River in Prikolyma area, Magadan Region, Russia
Entactinia proceraspina	E	–	–	Aitchison 1993b: 113	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinia prodigialis	E	–	–	Nazarov 1975: 52	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Entactinia profundisulcus	E	–	Ts	Aitchison 1993b: 114	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinia pycnoclada	E	–	–	Nazarov & Ormiston 1985: 19	Lower Permian	Sakmarian	Sarabil Formation, Kondurovska, Orenburgskaya Region, S Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Entactinia* (91) continuation**							
Entactinia quantilla	E	–	–	Foreman 1963: 273	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia reticulata	E	–	–	Sashida & Tonishi 1985: 10	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Entactinia rostriformis	E	–	–	Afanasieva & Amon 2008: 465	Lower Devonian	Emsian	Kamennaya Gora, Tanalyk River, Southern Ural, Russia
Entactinia sashidai	E	–	–	Feng *in* Feng *et al.* 2007: 23	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Entactinia sexradiata	E	–	–	Won 1997a: 348	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinia somphorhips	E	–	–	Foreman 1963: 272	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia spinosa	E	–	–	Liu 1992: 129	Upper Carboniferous	Bashkirian	Houxia Formation, Ewirgol-Houxia districts of Ulumuqi, Xinjiang, China
Entactinia spongites	E	–	–	Foreman 1963: 272	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia suave	E	–	–	Nazarov *in* Nazarov & Kruycheck 1977: 1447	Upper Devonian	Famennian	Eletsk horizon, Valavsk, Belarus
Entactinia subulata	E	–	–	Webby & Blom 1986: 149	Upper Ordovician	Katian	Malongulli Formation, Belubula River, E of Canowindra, central NSW, Australia
Entactinia tenuiacerosa	E	–	–	Nazarov 1975: 52	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Entactinia tyrrelli	E	–	–	Nazarov & Ormiston 1985: 19	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Entactinia unica	E	–	–	Nazarov 1975: 54	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Entactinia unica	E	–	T	Nazarov *in* Nazarov *et al.* 1977: 917	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Entactinia vulgaris	E	–	–	Won 1983: 144	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Entactinia vulgaris microporata	E	–	–	Braun 1989: 88	Lower Carboniferous	upper Tournaisian	Pebbles of siliceous shale from the lower Main-valley near Frankfurt a. M., Germany
Entactinia wangi	E	–	–	Feng *in* Feng *et al.* 2007: 21	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Entactinia xinjiangensis	E	–	–	Wang 1997: 153	Upper Devonian	Famennian	Gennaren Formation, S Utubulak, NW Jungar Basin, Xinjiang, China
Entactinia? *additiva*	E	–	–	Foreman 1963: 273	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia? *brilonensis*	E	–	–	Won 1983: 144	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Entactinia? *delvolvei*	E	–	–	Gourmelon 1987: 45	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Entactinia? *inaequoporosa*	E	–	–	Won 1983: 145	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Entactinia? *multispinosa*	E	–	–	Won 1983: 145	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Entactinia? *octaculeata*	E	–	–	Won 1983: 146	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Entactinia? *pantotolma*	E	–	–	Braun 1989: 88	Lower Carboniferous	upper Tournaisian	Pebbles of siliceous shale from the lower Main-valley near Frankfurt a. M., Germany
Entactinia? *sheeprockensis*	E	–	–	Park & Won 2012: 54	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Entactinia? *spinifera*	E	–	–	Amon, Braun & Chuvashov 1990: 121	Lower Permian	Artinskian	Shelyvaginsk Formation, around Sim Town, Chalyabinskaya region, Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Entactinia* (91) continuation**							
Entactinia? *spongia*	E	–	–	Renz 1990: 369	Upper Ordovician	Katian	Hanson Creek Formation, N Martin Ridge, Eureka County, Nevada, USA
Entactinia? *strena*	E	–	–	Feng & Ye 1996: 19	Middle Devonian	Givetian	Lailei Formation, Lila Village, Ximeng County, SW Yunnan, China
Entactinia? *sychnacanthina*	E	–	–	Foreman 1963: 274	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinia? *unispina*	E	–	–	Won 1991b: 98	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Entactinia? *ximengensis*	E	–	–	Feng & Ye 1996: 19	Middle Devonian	Givetian	Lailei Formation, Lila Village, Ximeng County, SW Yunnan, China
***Entactinosphaera* (92)**							
Entactinosphaera aculeata	E	–	–	Nazarov 1975: 70	Upper Ordovician	Hirnantian	Otyzbes area, Qostanay, Central Kazakhstan
Entactinosphaera aculeatissima	E	–	–	Aitchison 1993b: 114	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinosphaera aenigma	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 66	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Entactinosphaera aitpaiensis	E	–	–	Nazarov 1973a: 697	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Entactinosphaera aksakensis	E	–	T	Nazarov 1975: 68	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Entactinosphaera assidera	E	–	–	Nazarov 1975: 64	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Entactinosphaera aubouini	E	–	–	Caridroit & De Wever 1986: 75	Upper Permian	Wuchiapingian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Entactinosphaera australis	E	–	–	Aitchison 1993b: 115	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinosphaera baragensis	E	–	–	Nazarov *in* Nazarov *et al.* 1981: 83	Upper Devonian	Famennian	Duksundinsk Formation, along Duksunda River, Magadan, Russia
Entactinosphaera bellula	E	–	–	Wang 1997: 154	Upper Devonian	Famennian	Gennaren Formation, S Utubulak, NW Jungar Basin, Xinjiang, China
Entactinosphaera brevispinosa	E	–	–	Sashida & Tonishi 1988: 529	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Entactinosphaera calthrata	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 65	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Entactinosphaera cancellicula	E	–	–	Foreman 1963: 278	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera carssispira	E	–	–	Liu 1992: 129	Upper Carboniferous	Bashkirian	Houxia Formation, Ewirgol-Houxia districts of Ulumuqi, Xinjiang, China
Entactinosphaera cimelia	E	–	–	Nazarov & Ormiston 1985: 22	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Entactinosphaera conglobata	E	–	–	Nazarov 1975: 67	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Entactinosphaera crassiclathrata	E	–	–	Nazarov & Ormiston 1985: 20	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Entactinosphaera dystactotata	E	–	–	Foreman 1963: 276	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera egindyensis	E	–	–	Nazarov 1975: 61	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Entactinosphaera esostrongyla	E	–	T	Foreman 1963: 274	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera euthlasta	E	–	–	Foreman 1963: 276	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Entactinosphaera* (92) continuation**							
Entactinosphaera excurrens	E	–	–	Nazarov *in* Nazarov & Popov 1980: 40	Upper Ordovician	Hirnantian	Ul'kuntassk Member, along Oy-Su River, Kazakhstan
Entactinosphaera excurrens	–	inv.	–	Nazarov 1980: 23	Upper Ordovician	Hirnantian	Ul'kuntassk Member, along Oy-Su River, Kazakhstan
Entactinosphaera explicata	E	–	–	Nazarov 1975: 68	Middle Ordovician	Darriwilian	Erzhansk Formation, Lake Sasykser, NE Central Kazakhstan
Entactinosphaera foremanae	E	–	Td	Ormiston & Lane 1976: 165	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Entactinosphaera fredericki	E	–	–	Foreman 1963: 275	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera grandis	E	–	–	Nazarov 1975: 65	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Entactinosphaera guangxiensis	E	–	–	Li & Wang 1991: 400	Upper Devonian	Frasnian	Liukiang Formation, Etang section, Hexian County, Guangxi, China
Entactinosphaera hystricosa	E	–	–	Foreman 1963: 278	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera inconstans	E	–	–	Nazarov 1975: 68	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Entactinosphaera inpercepta	E	–	–	Nazarov 1975: 70	Upper Ordovician	Hirnantian	Otyzbes area, Qostanay, Central Kazakhstan
Entactinosphaera inusitata	E	–	–	Foreman 1963: 275	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera liquidambarfructa	E	–	–	Ormiston & Lane 1976: 166	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Entactinosphaera menneri	–	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, outcrop 1904, Lyaiol River, Timan-Pechora Basin, Russia
Entactinosphaera neocimelia	E	–	–	Feng, Fang, Zhang & Huang 1998: 240	Upper Permian	Changhsingian	Papai Formation of Changning-Menglian Belt, Papai Village, Cangyuan County, Yunnan, China
Entactinosphaera palimbola	E	–	–	Foreman 1963: 277	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera paracimela	E	–	–	Feng & Liu 1993: 558	Upper Permian	Changhsingian	Laba Group, SW Yunnan, China
Entactinosphaera pseudocimelia	E	–	–	Sashida & Tonishi 1988: 528	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Entactinosphaera pulcherima	E	n.n.	–	Nazarov & Ormiston 1990: 16	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Entactinosphaera pulcherima	E	–	–	Nazarov & Ormiston 1993: 32	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Entactinosphaera pulcherima	–	n.n.	–	Nazarov 1988: 130	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Entactinosphaera riedeli	E	–	Ts	Foreman 1963: 275	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera ruesti	E	–	–	Won 1991b: 99	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Entactinosphaera strangulata	E	–	T	Nazarov & Ormiston 1985: 20	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Entactinosphaera symphypora	E	–	–	Foreman 1963: 277	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera tretactinia	E	–	–	Foreman 1963: 276	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera unimana	E	–	–	Nazarov *in* Nazarov & Kruycheck 1977: 1448	Upper Devonian	Famennian	Eletsk horizon, Valavsk, Belarus
Entactinosphaera variacanthina	E	–	Ts	Foreman 1963: 278	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera verrucula	E	–	–	Nazarov *in* Nazarov & Popov 1976: 408	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Entactinosphaera wuhanensis	–	n.n.	–	Feng 1992: 59	Middle Permian	Capitanian	Gufeng Formation, Hubei, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Entactinosphaera* (92) continuation**							
Entactinosphaera? almae	E	–	–	Won 1983: 147	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Entactinosphaera? altasulcata	E	–	–	Won 1983: 147	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Entactinosphaera? brevihebes	E	–	–	Won 1983: 148	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Entactinosphaera? crassispinosa	E	–	–	Sashida & Tonishi 1985: 12	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Entactinosphaera? diplostraca	E	–	–	Foreman 1963: 279	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera? elegans	E	–	–	Furutani 1990: 41	Upper Silurian	Gorstian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan
Entactinosphaera? erebenna	E	–	–	Foreman 1963: 279	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera? gengmaensis	–	n.n.	–	Feng 1992: 55	Upper Permian	Changhsingian	Papai Formation of Changning-Menglian Belt, Papai Village, Cangyuan County, Yunnan, China
Entactinosphaera? hapala	E	–	–	Foreman 1963: 280	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera? hirta	E	–	–	Nazarov *in* Nazarov & Popov 1980: 39	Middle Ordovician	Darriwilian	Kizyilzarsk Formation, area between Moyynty and Zhamishinsk Rivers, Kazakhstan
Entactinosphaera? octospina	E	–	–	Won 1991b: 98	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Entactinosphaera? orientalis	E	–	–	Sashida & Tonishi 1985: 11	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Entactinosphaera? polyacanthina	E	–	T	Foreman 1963: 280	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Entactinosphaera? riedelii	–	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Entactinosphaera? robusta	E	–	–	Aitchison 1993b: 116	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Entactinosphaera? trendalli	E	–	–	Won 1983: 148	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
***Eoalbaillella* (14)**							
Eoalbaillella lilaensis	Al	–	T	Feng & Liu 1992: 550	Middle Devonian	Givetian	Lailei Formation, Lila Village, Ximeng County, Yunnan, China
Eoalbaillella turkensis	Al	–	–	Kozur 1997: 49	Middle Devonian	Givetian	Gerence, Karaburun peninsula, Izmir Region, Turkey
***Eoconcharium* (339)**							
Eoconcharium chinense	n.r.	i.s.	Th	Hao & Shu 1987: 309	Lower Cambrian	Terreneuvian	Shuijingtuo Formation, Shaanxi Province, Zhenba County, China
Eoconcharium chinense	n.r.	inv.	–	Shu & Chen 1989: 992	Lower Cambrian	Stage 3	Dengying Formation, Xiaoyang Village, Zhenba, Shaanxi Province, Zhenba County, China
Eoconcharium ovalnm	n.r.	i.s.	–	Hao & Shu 1987: 309	Lower Cambrian	Terreneuvian	Shuijingtuo Formation, Shaanxi Province, Zhenba County, China
Eoconcharium rhomboidale	n.r.	i.s.	–	Hao & Shu 1987: 309	Lower Cambrian	Terreneuvian	Shuijingtuo Formation, Shaanxi Province, Zhenba County, China
Eoconcharium spiniferum	n.r.	i.s.	–	Hao & Shu 1987: 309	Lower Cambrian	Terreneuvian	Shuijingtuo Formation, Shaanxi Province, Zhenba County, China
Eoscenidium							
Eoscenidium hexaradiatum	n.r.	i.s.	–	Wang 1989: 156	Lower Cambrian	–	Niutitang Formation, Sandu district, Guizhou Province, China
Eoscenidium longicrurum	n.r.	i.s.	–	Wang 1989: 156	Lower Cambrian	–	Damiao Formation, Erlongping Group, Eastern Qinling ophiolite belt, Henan Province, China
Eoscenidium longiradiatum	n.r.	i.s.	–	Wang 1989: 155	Lower Cambrian	–	Damiao Formation, Erlongping Group, Eastern Qinling ophiolite belt, Henan Province, China
Eoscenidium solidescens	n.r.	i.s.	Tnr	Wang 1989: 155	Lower Cambrian	–	Niutitang Formation, Sandu district, Guizhou Province, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Eostylodictya* (136)**							
Eostylodictya eccentrica	E	–	Ts	Ormiston & Lane 1976: 171	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Eostylodictya palaeoeccentrica	E	–	–	Won & Seo 2010: 252	Lower Carboniferous	Visean	Bergisches Land, N Westfalia, Germany
Eostylodictya pericinctus spinosa	E	–	–	Won & Seo 2010: 253	Lower Carboniferous	Visean	Bergisches Land, N Westfalia, Germany
Eostylodictya speculum	E	–	Ts	Won 1983: 152	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
***Etymalbaillella* (294)**							
Etymalbaillella renzii	IS (O&F)	–	–	Li 1995: 338	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Etymalbaillella toriterminolis	IS (O&F)	–	–	Li 1995: 338	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Etymalbaillella yennienii	IS (O&F)	–	T	Li 1995: 338	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
***Follicucullus* (31)**							
Follicucullus bipartitus	Al	–	–	Caridroit & De Wever 1984: 640	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Follicucullus bispinosus	Al	–	–	Kozur 1993: 105	Upper Permian	upper Changhsingian	Lamar Limestone, Guadalupe Mts. Culberson County, West Texas, USA
Follicucullus crenulatus	Al	–	–	Spiller 2002: 26	Middle Permian	–	Lower Chert Member, Semanggol Formation, Pokok Sena, NW Peninsular Malaysia
Follicucullus dactylinus	Al	–	–	Rudenko *in* Rudenko & Panasenko 1990b: 188	Upper Permian	Wuchiapingian	Pantov Member, Tauka Terrane, Tumanovk, Pantov area, Primorskiy Kray, Russia
Follicucullus dilatatus	Al	–	–	Rudenko *in* Belyansky *et al.* 1984: 54	Upper Permian	Capitanian	Sebuchar Formation of Taukha Belt, Dal'nny-Kut, Bol'shoy Ussurka, Primorskiy Kray, Russia
Follicucullus elongatus	Al	–	–	Spiller 2002: 27	Middle Permian	–	Lower Chert Member, Semanggol Formation, Pokok Sena, NW Peninsular Malaysia
Follicucullus falx	Al	–	–	Caridroit & De Wever 1984: 641	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Follicucullus furca	Al	–	–	Caridroit & De Wever 1986: 64	Upper Permian	Wuchiapingian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Follicucullus guangxiensis	Al	–	–	Wang *in* Wang *et al.* 2012: 108	Upper Permian	upper Changhsingian	Bancheng Formation, SE Guangxi, China
Follicucullus hamatus	Al	–	–	Caridroit & De Wever 1984: 642	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Follicucullus hamatus uncinatus	Al	–	–	Caridroit & De Wever 1984: 642	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Follicucullus japonicus	Al	–	–	Ishiga 1991: 108	Upper Permian	Changhsingian	Imajo Unit, NW of the Nabejiri-yama area, Taga Town, Inukami-gun, Shiga, Japan
Follicucullus lagenarius	Al	–	–	Rudenko *in* Belyansky *et al.* 1984: 55	Upper Permian	Capitanian	Sebuchar Formation of Taukha Belt, Dal'nny-Kut, Bol'shoy Ussurka, Primorskiy Kray, Russia
Follicucullus latior	Al	–	–	Feng & Liu 1993: 557	Upper Permian	Changhsingian	Laba Group, SW Yunnan, China
Follicucullus monacanthus	Al	–	–	Ishiga & Imoto *in* Ishiga *et al.* 1982b: 276	Lower Permian	Kungurian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Ashimi-dani section, Ukyo-ku, Kyoto, Japan
Follicucullus orthogonus	Al	–	Ts	Caridroit & De Wever 1984: 642	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Follicucullus porrectus	Al	–	–	Rudenko *in* Belyansky *et al.* 1984: 55	Upper Permian	Capitanian	Sebuchar Formation of Taukha Belt, Dal'nny-Kut, Bol'shoy Ussurka, Primorskiy Kray, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Follicucullus* (31) continuation**							
Follicucullus quadrataris	Al	–	–	Wang *in* Wang *et al.* 1994: 187	Lower Permian	Kungurian	Dachongling section, Qinzhou City, Guangxi, S China
Follicucullus scholasticus	Al	–	Ts	Ormiston & Babcock 1979: 333	Middle Permian	Capitanian	Bell Canyon Formation, Delaware Basin, Culberson County, W Texas, USA
Follicucullus sphaericus	Al	–	–	Takemura *in* Takemura *et al.* 1999: 760	Middle Permian	Capitanian	Oruatemanu Formation, Waipapa Terrane, Arrow Rocks, North Island, New Zealand
Follicucullus ventricosus	Al	–	T	Ormiston & Babcock 1979: 332	Middle Permian	Capitanian	Bell Canyon Formation, Delaware Basin, Culberson County, W Texas, USA
Follicucullus whangaroaensis	Al	–	–	Takemura *in* Takemura *et al.* 1999: 763	Middle Permian	Capitanian	Oruatemanu Formation, Waipapa Terrane, Arrow Rocks, North Island, New Zealand
Follicucullus? *charveti*	Al	–	–	Caridroit & De Wever 1984: 641	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
***Foremanconus* (32)**							
Foremanconus postsakmaraensis	Al	–	–	Kozur & Mostler 1989: 180	Lower Permian	Artinskian	Sasayama-cho, Takigun, Hyogo Prefecture, Japan
***Foremanhelena* (172)**							
Foremanhelena circula	L	–	–	Shang, Caridroit & Wang 2001: 233	Upper Permian	Changhsingian	Changshing Formation, Liuqiao section, Fusui County, southern Nanning, Guangxi, China
Foremanhelena intermixta	L	–	–	Feng *in* Feng *et al.* 2006b: 839	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Foremanhelena robusta	L	–	–	Feng *in* Feng *et al.* 2006b: 839	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Foremanhelena triangula	L	–	T	De Wever & Caridroit 1984: 106	Upper Permian	Wuchiapingian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
***Foremaniella* (225)**							
Foremaniella helenae	N?	–	–	Deflandre 1973c: 1150	Lower Carboniferous	Visean	Cabrières, Hérault, France
***Franklinia* (268)**							
Franklinia dipulvisphaera	S	–	–	Jones & Noble 2006: 312	MIddle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Franklinia tricae	S	–	T, Th	Jones & Noble 2006: 310	MIddle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
***Fukujius* (143)**							
Fukujius yamakoshii	E	–	Td	Furutani 1990: 47	Upper Silurian	Pridoli	Yoshiki Formation, Hida-gaien Belt, Ichinotani Valley, Fukuji area, Takayama City, Gifu, Japan
***Fungomacula* (295)**							
Fungomacula barbatula	S	–	T	Won *in* Won & Below 1999: 336	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
***Fusalfanus* (257)**							
Fusalfanus bilateralis	S	–	–	Tetard, Noble & Danelian *in* Tetard *et al.* 2015: 871	Upper Silurian	Gorstian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Fusalfanus osobudaniensis	S	–	T	Furutani 1990: 38	Upper Silurian	Gorstian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan
Fusalfanus? *konomoriensis*	S	–	–	Aitchison, Hada, Ireland & Yoshikura 1996: 66	Upper Silurian	Pridoli	Unit G4, Jingamori, Kurosegawa terrane, S Mt. Konomori, Kochi City, Shikoku, Japan
***Fusuconcharium* (340)**							
Fusuconcharium minimum	n.r.	i.s.	–	Hao & Shu 1987: 309	Lower Cambrian	Terreneuvian	Shuijingtuo Formation, Shaanxi Province, Zhenba County, China
Fusuconcharium typicum	n.r.	i.s.	Tnr	Hao & Shu 1987: 309	Lower Cambrian	Terreneuvian	Shuijingtuo Formation, Shaanxi Province, Zhenba County, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Futobari* (258)**							
Futobari morishitai	S	–	–	Furutani 1990: 35	Upper Silurian	Pridoli	Yoshiki Formation, Hida-gaien Belt, Ichinotani Valley, Fukuji area, Takayama City, Gifu, Japan
Futobari solidus	S	–	T	Furutani 1990: 34	Upper Silurian	Pridoli	Yoshiki Formation, Hida-gaien Belt, Ichinotani Valley, Fukuji area, Takayama City, Gifu, Japan
Futobari? *jingamoriensis*	S	–	–	Aitchison, Hada, Ireland & Yoshikura 1996: 65	Upper Silurian	Pridoli	Unit G4, Jingamori, Kurosegawa terrane, S Mt. Konomori, Kochi City, Shikoku, Japan
Futobari? *tosaensis*	S	–	–	Aitchison, Hada, Ireland & Yoshikura 1996: 65	Upper Silurian	Pridoli	Unit G4, Jingamori, Kurosegawa terrane, S Mt. Konomori, Kochi City, Shikoku, Japan
***Gansuceratoikiscum* (15)**							
Gansuceratoikiscum guanzhuangensis	Al	–	T	Wang *in* Wang *et al.* 2010: 472	Upper Ordovician	Sandbian	Pinglian Formation, Guanzhuang section, Pinglang City, Gansu, China
***Gedauia* (137)**							
Gedauia bibrachialis	E	–	Ts	Won 1983: 153	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
***Gigantospiculum* (54)**							
Gigantospiculum dumitricai	Ar	–	T	Won & Iams 2015a: 17	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
***Glanta* (16)**							
Glanta crinerensis	Al	–	–	Schwartzapfel & Holdsworth 1996: 129	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Glanta fragilis	Al	–	T	Wakamatsu, Sugiyama & Furutani 1990: 180	Lower Devonian	Emsian	Nakahata Formation, SW of Mt. Yokokurayama, Ochi Town, Shikoku, Japan
Glanta triangularis	Al	–	–	Wakamatsu, Sugiyama & Furutani 1990: 182	Lower Devonian	Emsian	Nakahata Formation, SW of Mt. Yokokurayama, Ochi Town, Shikoku, Japan
Glanta yokokurayamaensis	Al	–	–	Umeda 1998a: 101	Middle Devonian	Eifelian	Nakahata Formation, Section C, Ochi Town, Shikoku, Japan
***Goodbodium* (144)**							
Goodbodium elegans	E	–	–	Furutani 1990: 43	Upper Silurian	Gorstian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan
Goodbodium nishiyamai	E	–	–	Furutani 1990: 44	Upper Silurian	Pridoli	Yoshiki Formation, Hida-gaien Belt, Ichinotani Valley, Fukuji area, Takayama City, Gifu, Japan
***Gracilentactinia* (93)**							
Gracilentactinia gracilis	E	–	T	Kozur & Mostler 1989: 193	Lower Permian	Kungurian	Koshelev Foramtion, Alogazovo Village, Movsovic Region, Russia
Gracilentactinia sphaerica	E	–	–	Kozur & Mostler 1989: 193	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
***Grandetortura* (200)**							
Grandetortura nipponica	L	–	T	Sashida & Tonishi 1991: 92	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
***Grosmorneus* (55)**							
Grosmorneus globosus	Ar	–	T	Won & Iams 2002: 31	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
***Guangxitrisphaera* (315)**							
Guangxitrisphaera wanyaoensis	–	n.d.	Td	Wang & Kuang 1993: 281	Lower Carboniferous	Tournaisian	Shijia Formation, Shijia Resevoir, Qinzhou area, Guangxi Zhuang Region, SW China
***Gustefana* (316)**							
Gustefana obliqueannulata	–	n.d.	Td	Kozur 1993: 111	Upper Permian	Wuchiapingian	Sosio Valley Area, Torrente San Calogero, Western Sicily, Italy

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Gyrosphaera* (250)**							
Gyrosphaera cavea	S	–	–	Jones & Noble 2006: 304	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Gyrosphaera primigena	S	–	–	Umeda & Suzuki 2005: 87	Lower Silurian	Aeronian	Kallholn Formation, Solberga Quarry of Boda, Siljan area, Dalarna, Sweden
Gyrosphaera raneatela	S	–	T	Noble & Maletz 2000: 267	Lower Silurian	Telchyian	Kallholn Formation, Solberga Quarry of Boda, Siljan area, Dalarna, Sweden
Gyrosphaera siljanensis	S	–	–	Noble & Maletz 2000: 267	Lower Silurian	Telchyian	Kallholn Formation, Solberga Quarry of Boda, Siljan area, Dalarna, Sweden
Halicalyptra							
Halicalyptra aculeata	–	n.d.	–	Rüst 1892: 179	Lower Devonian	–	Southern Urals, Russia
Halicalyptra ambulans	–	n.d.	–	Ruedemann & Wilson 1936: 1578	Lower Ordovician	Floian	Normanskill chert, Fly Summit, Washington County, New York, USA
Halicalyptra similis	–	n.d.	–	Ruedemann & Wilson 1936: 1578	Lower Ordovician	Floian	Normanskill chert, Fly Summit, Washington County, New York, USA
Halicapsa							
Halicapsa megapora	–	n.d.	–	Rüst 1892: 181	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Haliomma							
Haliomma antiquum	–	n.d.	–	Ruedemann & Wilson 1936: 1573	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Haliomma cornutum	–	n.d.	–	Hinde 1890: 51	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Haliomma paternum	–	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Haliomma penrosei	–	n.d.	–	Ruedemann & Wilson 1936: 1573	Lower Ordovician	Floian	Normanskill chert, Glenmont, Albany County, New York, USA
Haliomma perfecta	–	n.d.	–	Aberdeen 1940: 138	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Haliomma speciosum	–	n.d.	–	Rüst 1892: 148	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Haliomma stigmophorum	–	n.d.	–	Rüst 1892: 148	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Haliomma vetustum	–	n.d.	–	Hinde 1890: 51	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
***Haplentactinia* (134)**							
Haplentactinia alekseevi	E	–	–	Afanasieva 2000c: 374	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Haplentactinia armillata	E	–	–	Nazarov *in* Nazarov & Popov 1980: 55	Middle Ordovician	Darriwilian	Kizyilzarsk Formation, area between Moyynty and Zhamishinsk Rivers, Kazakhstan
Haplentactinia armista	E	–	–	Siveter, Aitchison, Siveter & Sutton 2007: 91	Middle Silurian	Homerian	Wenlock Series, Herefordshire, England, UK
Haplentactinia arrhinia	E	–	Ts	Foreman 1963: 270	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Haplentactinia attenuata	E	–	–	Goto, Umeda & Ishiga 1992: 156	Upper Ordovician	Katian	Malongulli Formation, Lachlan Fold Belt, 30 km NW of Taralga, NSW, Australia
Haplentactinia baltica	E	–	–	Nazarov *in* Nazarov & Nolvak 1983: 5	Upper Ordovician	Hirnantian	Sau'yask Formation, Bore hole Eikla, Saaremaa, Estonia
Haplentactinia barskovi	E	–	–	Afanasieva 2000c: 375	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Haplentactinia bicepsispina	–	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Haplentactinia bornazi	E	–	–	Afanasieva 2000a: 31	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Haplentactinia* (134) continuation**							
Haplentactinia flagellifera	E	–	–	Nazarov & Ormiston 1993: 40	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Haplentactinia flagellifera	–	n.n.	–	Nazarov 1988: 129	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Haplentactinia inaudata	–	n.n.	–	Nazarov 1988: 129	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Haplentactinia infida	E	–	–	Nazarov *in* Nazarov *et al.* 1975: 102	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Haplentactinia infida	E	–	–	Nazarov *in* Nazarov *et al.* 1977: 919	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Haplentactinia jinzhangii	–	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Haplentactinia juncta	E	–	–	Nazarov 1975: 58	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Haplentactinia kuzminae	E	–	–	Afanasieva & Amon 2011: 1504	Upper Devonian	middle Frasnian	Pechora Basin, Ukhtinskii District, Ukhta River, Russia
Haplentactinia minia	–	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Haplentactinia rhinophyusa	E	–	T	Foreman 1963: 270	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Haplentactinia silurica	E	–	–	Nazarov & Ormiston 1990: 18	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Haplentactinia silurica	E	–	–	Nazarov & Ormiston 1993: 39	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Haplentactinia silurica	E	–	–	Nazarov 1988: 122	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Haplentactinia simplex	E	–	–	Wang *in* Wang & Luo 2009: 136	Upper Devonian	Frasnian	Xiangshuidong Formation, Bazhai, Ziyun County, Guizhou, China
Haplentactinia vilvaensis	E	–	–	Afanasieva & Amon 2011: 1502	Upper Devonian	lower Famennian	Vilva River of the Perm Region, Middle Urals, Russia
Haplentactinia? *ichikawai*	E	–	–	Caridroit & De Wever 1984: 643	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Haplentactinia? *ozawai*	E	–	–	Furutani 1990: 40	Upper Silurian	Gorstian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan
Haplentactinia? *pentochela*	E	–	–	Li 1994: 263	Upper Silurian	Gorstian	Keerhada, Mayila Mts., Xinjiang, China
***Haploaxon* (190)**							
Haploaxon melorax	–	n.d.	–	Cordey 1998: 53-54	Lower Permian	Artinskian?	SW of Aspen Grove, British Columbia, Canada
Haploaxon merrittensis	–	n.d.	Ts	Cordey 1998: 53	Lower Permian	Artinskian?	SW of Aspen Grove, British Columbia, Canada
***Haplodiacanthus* (33)**							
Haplodiacanthus anfractus	Al	–	Ts	Nazarov & Rudenko 1981: 133	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Haplodiacanthus circinatus	Al	–	–	Nazarov & Ormiston 1985: 47	Upper Carboniferous	Gzhelian	E of Saraktash, Nikol Village, Ural River, Bashkirsk Region, Urals, Russia
Haplodiacanthus levitoflexus	Al	–	–	Nazarov *in* Isakova & Nazarov 1986: 116	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Haplodiacanthus levitoflexus fenistratus	Al	–	–	Nazarov *in* Isakova & Nazarov 1986: 116	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
Haploplus							
Haploplus qunii	–	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Haplopolaris							
Haplopolaris dipolaris	–	n.n.	–	Li 1991: 75	Upper Silurian	Gorstian	Mayila Complex, Keerhada, S Mayila Mt., Xinjiang, China
***Haplopolus* (269)**							
Haplopolus dipolus	S	–	Ts	Li 1994: 263	Upper Silurian	Gorstian	Keerhada, Mayila Mts., Xinjiang, China
***Haplotaeniatum* (251)**							
Haplotaeniatum cathenatum	S	–	–	Nazarov & Ormiston 1993: 41	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Haplotaeniatum cathenatum	–	n.n.	–	Nazarov 1988: 122	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Haplotaeniatum circulus	S	–	–	Pouille & Danelian *in* Pouille *et al.* 2014: 157	Middle Ordovician	upper Darriwilian	Shundy Formation, Balkhash region, Kazakhstan
Haplotaeniatum fenestratum	S	–	–	Goto, Umeda & Ishiga 1992: 158	Upper Ordovician	Katian	Malongulli Formation, Lachlan Fold Belt, 30 km NW of Taralga, NSW, Australia
Haplotaeniatum fissura	S	–	–	MacDonald 2006: 20	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Haplotaeniatum labyrintheum	S	–	Th	Nazarov & Ormiston 1990: 20	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Haplotaeniatum labyrintheum	–	inv.	–	Nazarov & Ormiston 1993: 41	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Haplotaeniatum labyrintheum	–	n.n.	–	Nazarov 1988: 122	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Haplotaeniatum leptum	–	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Haplotaeniatum nunavutensis	S	–	–	MacDonald 2006: 23	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Haplotaeniatum ovatum	S	–	–	Noble & Webby 2009: 557	Upper Ordovician	Katian	Malongulli Formation, Cliefden Caves area, NSW, Australia
Haplotaeniatum prolatum	S	–	–	Noble & Webby 2009: 557	Upper Ordovician	Katian	Malongulli Formation, Cliefden Caves area, NSW, Australia
Haplotaeniatum spinatum	S	–	–	Goto, Umeda & Ishiga 1992: 157	Upper Ordovician	Katian	Malongulli Formation, Lachlan Fold Belt, 30 km NW of Taralga, NSW, Australia
Haplotaeniatum tegimentum	S	–	–	Nazarov & Ormiston 1990: 20	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Haplotaeniatum tegimentum	–	inv.	–	Nazarov & Ormiston 1993: 42	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Haplotaeniatum tegimentum	–	n.n.	–	Nazarov 1988: 66	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Haplotaeniatum vertigospongum	S	–	–	Jones & Noble 2006: 302	MIddle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Haplotaeniatum? *aperturatum*	S	–	–	Noble, Ketner & McClellan 1997: 721	Lower Silurian	Rhuddanian	Cherry Spring Chert, Garden Pass, Roberts Mts. Allochthon, Nevada, USA
Haplotaeniatum? *giganteum*	S	–	–	Pouille & Danelian *in* Pouille *et al.* 2014: 160	Middle Ordovician	upper Darriwilian	Shundy Formation, Balkhash region, Kazakhstan
Hapolpolus							
Hapolpolus ruedemannii	–	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Hegleria* (270)**							
Hegleria agnusiforma	S	–	–	Noble & Jin 2010: 140	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts., Culberson County, W Texas, USA
Hegleria globosa	S	–	–	Noble & Jin 2010: 141	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts., Culberson County, W Texas, USA
Hegleria mammifera	S	–	T	Nazarov & Ormiston 1985: 22	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
***Helenifore* (17)**							
Helenifore gogoense	Al	–	–	Aitchison 1993b: 111	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Helenifore laticlavium	Al	–	T	Nazarov & Ormiston 1983a: 464	Upper Devonian	Frasnian	Sadler Range, SE Cap Creek Gap, Canning Basin, Western Australia
Helenifore pilosidiscus	Al	–	–	Aitchison et al 1999: 158	Middle Devonian	Eifelian	Gamilaroi terrane, Silver Gully, Nundle, NSW, Australia
Helenifore planus	Al	–	–	Umeda 1997: 418	Upper Silurian	Gorstian	Jyoru Formation, Kurosegawa Belt, Konomori area, Kochi City, Shikoku, Japan
Helenifore quadrispina	Al	–	–	Noble & Lenz 2007: 1050	Middle Silurian	Homerian	Cape Phillips Formation, Rookery Creek, Cornwallis Island, Canadian Arctic Archipelago
Helenifore? *fasciola*	Al	–	–	Nazarov & Ormiston 1993: 52	Middle Silurian	Homerian	Maksyutov Complex, Tarangul River, 10 km N of Kosistek Village, S Urals, Russia
Helenofore							
Helenofore fasciola	–	n.n.	–	Nazarov 1988: 122	Upper Silurian	Pridoli	Maksyutov Complex, Tarangul River, 10 km N of Kosistek Village, S Urals, Russia
Heliodiscus							
Heliodiscus acucinctus	–	n.d.	–	Rüst 1892: 165	Lower Silurian	–	Cabrières, Hérault, France
Heliodiscus saturnalis	–	n.d.	Td	Rüst 1892: 165	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
***Helioentactinia* (94)**							
Helioentactinia aster	E	–	–	Aitchison 1993b: 118	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Helioentactinia biexosphaera	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 69	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Helioentactinia circumtexta	E	–	–	Nazarov 1975: 89	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Helioentactinia gudymovae	E	–	–	Afanasieva 2000b: 143	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Helioentactinia ikka	E	–	–	Nazarov & Ormiston 1990: 16	Lower Permian	Sakmarian	Dalny Tulkas Rill, Belskaya depression, Bashkortostan Region, S Urals, Russia
Helioentactinia ikka	E	–	–	Nazarov & Ormiston 1993: 34	Lower Permian	Sakmarian	Dalny Tulkas Rill, Belskaya depression, Bashkortostan Region, S Urals, Russia
Helioentactinia ikka	–	n.n.	–	Nazarov 1988: 156	Lower Permian	Artinskian	Dalny Tulkas Rill, Belskaya depression, Bashkortostan Region, S Urals, Russia
Helioentactinia nazarovi	E	–	–	Sashida & Tonishi 1985: 12	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Helioentactinia perjucunda	E	–	–	Nazarov & Ormiston 1983a: 460	Upper Devonian	Frasnian	Sadler Range, SE Cap Creek Gap, Canning Basin, Western Australia
Helioentactinia secutrix	E	–	–	Nazarov 1975: 90	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Helioentactinia stellaepolus	E	–	–	Aitchison 1993b: 119	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Helioentactinia* (94) continuation**							
Helioentactinia uralica	E	–	–	Kozur & Mostler 1989: 193	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Helioentactinia valavica	E	–	–	Nazarov & Ormiston 1993: 34	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Helioentactinia valavica	–	n.n.	–	Nazarov 1988: 130	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Helioentactinia yunnaensis	E	–	–	Wang *in* Wang *et al.* 2000: 248	Middle Devonian	Givetian	Changyucun Formation, Shaijingpo section, Xianyun County, Yunnan, China
Helioentactinia? *asymmetrica*	E	–	–	Nazarov 1975: 88	Middle Cambrian	–	Agyirsksk Formation, Mukhyr River, Chingiz Mountain range, eastern Kazakhstan
Helioentactinia? *bakanasensis*	E	–	T	Nazarov 1975: 89	Upper Cambrian	Furongian	Ushkyzyil'sk Formation, Ushkyzyl Mts, Gora Ushkyzyl, Gora Akshata,Qyzylord, E Kazakhstan
Helioentactinia? *prismspinosa*	E	–	–	Wakamatsu, Sugiyama & Furutani 1990: 168	Upper Silurian	Pridoli	Jyoru Formation, Kurosegawa Belt,, S Mt. Yokokurayama, Ochi Town, Shikoku, Japan
Heliosestrum							
Heliosestrum nigrum	E	–	–	Hinde 1899a: 54	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Heliosoma							
Heliosoma echinatum	E	–	–	Hinde 1899a: 50	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Heliosoma mojsisovicsi	E	–	–	Rüst 1892: 148	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Heliosoma paronae	E	–	–	Hinde 1899a: 50	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Heliosoma roemeri	–	n.d.	–	Rüst 1892: 148	Lower Silurian	–	Cabrières, Hérault, France
Heliosphaera							
Heliosphaera alternata	–	n.d.	–	Aberdeen 1940: 138	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Heliosphaera bardanum	–	n.d.	–	Rüst 1892: 147	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Heliosphaera clavata	–	n.d.	–	Hinde 1899a: 50	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Heliosphaera fenestrata	–	n.d.	–	Hinde 1899a: 49	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Heliosphaera haeckeli	–	n.d.	–	Ruedemann & Wilson 1936: 1572	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Heliosphaera kjrulfi	–	n.d.	–	Rüst 1892: 147	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Heliosphaera macrospinosa	–	n.d.	–	Aberdeen 1940: 138	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Heliosphaera micropora	–	n.d.	–	Ruedemann & Wilson 1936: 1572	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Heliosphaera robusta	E	–	–	Hinde 1899a: 49	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Heliosphaera ruesti	–	n.d. n.c.	–	Ruedemann & Wilson 1936: 1572	Lower Ordovician	Floian	Normanskill chert, Ghent, Columbia County, New York, USA
Heliosphaera tamworthi	E	–	–	Hinde 1899a: 49	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Heliosphaera venusta	–	n.d.	–	Ruedemann & Wilson 1936: 1572	Lower Ordovician	Floian	Normanskill chert, Ghent, Columbia County, New York, USA
***Helminentactinia* (259)**							
Helminentactinia nazarovi	–	n.n.	Td	Li 1991: 75	Upper Silurian	Gorstian	Mayila Complex, Keerhada, S Mayila Mt., Xinjiang, China
Helminentactinia nazarovi	–	n.d.	–	Li 1994: 268	Upper Silurian	Gorstian	Keerhada, Mayila Mts., Xinjiang, China
Helminentactinia nazarovi longispina	–	n.n.	–	Li 1991: 75	Upper Silurian	Gorstian	Mayila Complex, Keerhada, S Mayila Mt., Xinjiang, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
Hemisphaera							
Hemisphaera diflandrei	–	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Heptacladus							
Heptacladus permicus	E?	–	–	Kozur & Mostler 1989: 184	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Hexacladus							
Hexacladus speciosus	–	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Hexalastrum							
Hexalastrum infans	–	n.d.	–	Rüst 1892: 172	Carboniferous	–	Bükk-Gebirge, Inner Western Carpathians, Hungary
Hexalonche							
Hexalonche palaeozoica	E	–	–	Rüst 1892: 146	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Hexalonche valida	E	–	–	Rüst 1892: 146	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Hexastylidium							
Hexastylidium variatum	–	n.d.	–	Aberdeen 1940: 136	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Hexastylus							
Hexastylus basiporosus	–	n.d.	–	Aberdeen 1940: 136	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Hexastylus ferox	–	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Hexastylus montisnigrae	–	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
***Holdisphaera* (95)**							
Holdisphaera furutanii	E	–	T	Kozur & Mostler 1989: 187	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Holdisphaera laevis	E	–	–	Kozur & Mostler 1989: 187	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
***Holdsworthella* (34)**							
Holdsworthella perforata	Al	–	–	Kozur 1981: 269	Lower Permian	Sakmarian	Sarabil Formation, Kondurovska, Orenburgskaya Region, S Urals, Russia
Holdsworthella permica	Al	–	Ts	Kozur 1981: 268	Lower Permian	Sakmarian	Sarabil Formation, Kondurovska, Orenburgskaya Region, S Urals, Russia
***Holdsworthum* (145)**							
Holdsworthum japonicus	E	–	T	Furutani 1990: 45	Upper Silurian	Pridoli	Yoshiki Formation, Hida-gaien Belt, Ichinotani Valley, Fukuji area, Takayama City, Gifu, Japan
***Holoeciscus* (18)**							
Holoeciscus auceps	Al	–	T	Foreman 1963: 294	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Holoeciscus brevis	Al	–	–	Cheng 1986: 90	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Holoeciscus elongatus	Al	–	–	Kiessling & Tragelehn 1994: 230	Upper Devonian	Famennian	Frankenwald, north Bavaria, Germany
Holoeciscus foremanae	Al	–	–	Cheng 1986: 91	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Holoeciscus longus	Al	–	–	Schwartzapfel & Holdsworth 1996: 126	Upper Devonian	upper Famennian	Woodford Formation, Criner Hills 2A section, Carter County, Oklahoma, USA
Holoeciscus quasiauceps	Al	–	–	Wang 1997: 158	Upper Devonian	Famennian	Gennaren Formation, S Utubulak, NW Jungar Basin, Xinjiang, China
Holoeciscus renzae	Al	–	–	Schwartzapfel & Holdsworth 1996: 128	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Huasha* (2)**							
Huasha densa	Al	–	–	Cheng 1986: 71	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Huasha holdsworthi	Al	–	Ts	Cheng 1986: 73	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Huasha magnifica	Al	–	–	Cheng 1986: 74	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Huasha quinquecostata	Al	–	–	Cheng 1986: 74	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
***Inaequalientactinia* (96)**							
Inaequalientactinia deflandrei	E	–	–	Won 1991b: 101	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Inaequalientactinia gourmelonae	E	–	–	Won 1991b: 102	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Inaequalientactinia parva	E	–	–	Won 1991b: 103	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Inaequalientactinia typica	E	–	Ts	Won 1991b: 103	Lower Carboniferous	Tournaisian	Boulders in Quaternary Rhine Terrace, near Oberkassel, Bonn
Inaequalientactinia wuppertalensis	E	–	–	Won 1992: 203	Lower Carboniferous	Tournaisian	Riescheid Section, Wuppertal-Barmen, Germany
***Inanibigutta* (260)**							
Inanibigutta goodbodyii	S	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Inanibigutta ishigea	S	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Inanibigutta keerhadaensis	S	n.n.	–	Li 1991: 75	Upper Silurian	Gorstian	Mayila Complex, Keerhada, S Mayila Mt., Xinjiang, China
Inanibigutta keerhadaensis	S	–	–	Li 1994: 261	Lower Devonian	Emsian	Keerhada, Mayila Mts., Xinjiang, China
Inanibigutta llanvirniana	S	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Inanibigutta maletzi	S	–	–	Pouille & Danelian *in* Pouille *et al.* 2013: 1154	Middle Ordovician	upper Darriwilian	Shundy Formation, Balkhash region, Kazakhstan
Inanibigutta minuta	S	–	–	Wang 1993c: 100	Upper Ordovician	Sandbian	Pinglian Formation, Horizon Pg 3, Yindongguan village, Pinglian County, Gansu, China
Inanibigutta minutia	S	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Inanibigutta pinglianensis	S	–	–	Wang 1993c: 100	Upper Ordovician	Sandbian	Pinglian Formation, Horizon Pg 3, Yindongguan village, Pinglian County, Gansu, China
Inanigigutta							
Inanigigutta yaoi	S	n.n.	–	Li 1995: 332	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
***Inanigutta* (261)**							
Inanigutta gansuensis	S	–	–	Wang 1993c: 99	Upper Ordovician	Sandbian	Pinglian Formation, Horizon Pg 3, Yindongguan village, Pinglian County, Gansu, China
Inanigutta hanquanii	S	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Inanigutta haoroui	S	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Inanigutta magnifica	S	–	–	Maletz & Bruton 2008: 1193	Middle Ordovician	lower Darriwilian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Inanigutta* (261) continuation**							
Inanigutta yujingii	S	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Inanigutta zhiyuanii	S	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Inanigutta? *kyrgyza*	S	–	–	Danelian, Popov & Ghobadi Pour 2011: 591	Lower Ordovician	Floian	Sarydzhaz, eastern Kyrgyzstan
***Inanihella* (262)**							
Inanihella duroacus	S	n.n.	–	Nazarov & Ormiston 1993: 37	Middle Silurian	Homerian	Maksyutov Complex, Tarangul River, 10 km N Kosistek Village, S Urals, Russia
Inanihella duroacus	S	–	–	Nazarov 1988: 122	Upper Silurian	Pridoli	Maksyutov Complex, Tarangul River, 10 km N of Kosistek Village, S Urals, Russia
Inanihella legincula	S	n.n.	–	Nazarov 1988: 122	Middle Silurian	Homerian	Maksyutov Complex, Tarangul River, 10 km N of Kosistek Village, S Urals, Russia
Inanihella legiuncula	S	–	–	Nazarov & Ormiston 1993: 38	Middle Silurian	Homerian	Maksyutov Complex, Tarangul River, 10 km N Kosistek Village, S Urals, Russia
Inanihella perarmata	S	–	–	Nazarov & Ormiston 1993: 38	Middle Silurian	Homerian	Maksyutov Complex, Tarangul River, 10 km N Kosistek Village, S Urals, Russia
Inanihella perarmata	S	n.n.	–	Nazarov 1988: 122	Middle Silurian	Homerian	Maksyutov Complex, Tarangul River, 10 km N of Kosistek Village, S Urals, Russia
Inanihella sagena	S	–	–	Siveter, Aitchison, Siveter & Sutton 2007: 89	Middle Silurian	Homerian	Wenlock Series, Herefordshire, England, UK
Inanihella tarangulica	S	–	–	Nazarov & Ormiston 1984: 73	Middle Silurian	Homerian	Makyutov Complex, Tarangul River, Kosistek Village, Southern Ural, Kazakhstan
Inanihella vulnerata	S	n.n.	–	Nazarov 1988: 122	Middle Silurian	Homerian	Maksyutov Complex, Tarangul River, 10 km N of Kosistek Village, S Urals, Russia
Inanihella? *akzhala*	S	–	–	Danelian & Popov 2003: 333	Lower Ordovician	Floian	Akzhal Mts. S of Betpak-Dala desert, Kazakhstan
***Induropilarius* (317)**							
Induropilarius aenigmaticus	E	n.n.	Tn	Ters & Deflandre 1966: 340	Ordovician	–	Phtanites d'Angers, Vendée, France
***Insolitignum* (146)**							
Insolitignum peranima	E	–	–	MacDonald 1999: 2054	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Insolitignum vivanima	E	–	–	MacDonald 1999: 2055	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
***Intracorpus* (271)**							
Intracorpus octaedron	S	–	T	Won 1997a: 366	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
***Involutentactinia* (97)**							
Involutentactinia eccentra	E	–	T	Jones & Noble 2006: 297	MIddle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Involutentactinia eccentra var. *cupressa*	E	–	–	Jones & Noble 2006: 297	MIddle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
***Ishigaum* (173)**							
Ishigaum complanum	L	–	–	Feng *in* Feng *et al.* 2006b: 837	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Ishigaum craticula	L	–	–	Shang, Caridroit & Wang 2001: 233	Upper Permian	Changhsingian	Changshing Formation, Liuqiao section, Fusui County, southern Nanning, Guangxi, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Ishigaum* (173) continuation**							
Ishigaum fusinum	L	–	–	Feng *in* Feng *et al.* 2006b: 837	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Ishigaum klaengensis	L	–	–	Sashida *in* Sashida *et al.* 2000b: 254	Upper Permian	Changhsingian	Ratuburi Group, Sukhothai Fold Belt, section I, Khao Wang Chik, Rayong, Thailand
Ishigaum labaensis	L	–	–	Feng & Liu 1993: 545	Upper Permian	Changhsingian	Muyinhe Formation, Nanpan, Lancang County, Yunnan, China
Ishigaum longispina	L	–	–	Feng *in* Feng *et al.* 2006b: 837	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Ishigaum obesum	L	–	–	De Wever & Caridroit 1984: 100	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Ishigaum trifustis	L	–	T	De Wever & Caridroit 1984: 99	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Ishigaum tristylum	L	–	–	Feng *in* Feng *et al.* 2006b: 837	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Kalimnasphaera* (263)**							
Kalimnasphaera maculosa	S	–	T	Webby & Blom 1986: 152	Upper Ordovician	Katian	Malongulli Formation, Belubula River, E of Canowindra, central NSW, Australia
***Kantollum* (230)**							
Kantollum bicornum	N?	–	–	Cheng 1986: 163	Upper Carboniferous	Bashkirian	Johns Valley Shale, Pittsburg County, eastern Oklahoma, USA
Kantollum blancoensis	N?	–	–	Cheng 1986: 165	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Kantollum crinerensis	N?	–	–	Schwartzapfel & Holdsworth 1996: 149	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Kantollum longicornutum	N?	–	–	Wang *in* Wang *et al.* 2012: 112	Upper Devonian	Famennian	Shiti Reservoir Formation, Shiwu road section, Guangxi Zhuang Region, SW China
Kantollum pittsburgense	N?	–	T	Cheng 1986: 164	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Kantollum undulatum	N?	–	–	Cheng 1986: 164	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
***Kappaforma* (19)**							
Kappaforma insecta	Al	–	T	Noble & Lenz 2007: 1052	Middle Silurian	Homerian	Cape Phillips Formation, Rookery Creek, Cornwallis Island, Canadian Arctic Archipelago
***Kashiwara* (98)**							
Kashiwara magna	E	–	T	Sashida & Tonishi 1985: 15	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
***Klaengspongus* (244)**							
Klaengspongus formosus	S	–	–	Feng *in* Feng *et al.* 2009: 147	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Klaengspongus planus	S	–	–	Nestell & Nestell 2010: 25	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Klaengspongus spinosus	S	–	T	Sashida *in* Sashida *et al.* 2000b: 256	Upper Permian	Changhsingian	Ratuburi Group, Sukhothai Fold Belt, section I, Khao Wang Chik, Rayong, Thailand
Klaengspongus umbilicatus	S	–	–	Feng *in* Feng *et al.* 2009: 147	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Konyrium* (341)**							
Konyrium varium	n.r.	i.s.	Tnr	Nazarov *in* Nazarov & Popov 1976: 415	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Labyrinthia* (236)**							
Labyrinthia inexpectata	S	–	T	Maletz & Bruton 2007: 281	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
Labyrinthia robusta	S	–	–	Maletz 2007: 76	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
***Labyrinthosphaera* (252)**							
Labyrinthosphaera lancia	S	–	–	Jones & Noble 2006: 298	MIddle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Labyrinthosphaera macdonaldi	S	–	T	Noble & Maletz 2000: 268	Lower Silurian	Telchyian	Kallholn Formation, Solberga Quarry of Boda, Siljan area, Dalarna, Sweden
Labyrinthosphaera? lenzi	S	–	–	Jones & Noble 2006: 298	MIddle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
***Lacisus* (342)**							
Lacisus siphunculus	n.r.	i.s.	Tnr	Kozur 1993: 109	Upper Permian	Wuchiapingian	Sosio Valley Area, Torrente San Calogero, Western Sicily, Italy
***Lapidopiscum* (4)**							
Lapidopiscum piri	Al	–	–	Schwartzapfel & Holdsworth 1996: 94	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Lapidopiscum piveteaui	Al	–	T	Deflandre 1958: 2278	Lower Carboniferous	Visean	Cabrières, Hérault, France
Lapidopiscum transversum	Al	–	–	Schwartzapfel & Holdsworth 1996: 97	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
***Latentibifistula* (183)**							
Latentibifistula asperspongiosa	L	–	–	Sashida & Tonishi 1986: 7	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Latentibifistula triacanthophora	L	–	T	Nazarov & Ormiston 1983b: 374	Lower Permian	Sakmarian	Maloik Formation, Don Village, Ural River, Orenburgskaya Region, S Urals, Russia
***Latentidiota* (210)**							
Latentidiota choripelata	L	n.c.	–	Nazarov *in* Isakova & Nazarov 1986: 82	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Latentidiota clarisona	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 79	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Latentidiota fallacia	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 82	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Latentidiota medorensis	L	–	–	Nestell, Pope & Nestell 2012: 240	Upper Carboniferous	Moscovian	Mouse Creek Formation, Excello Shale Member, south-central Iowa, USA
Latentidiota semilamina	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 78	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Latentidiota trigimena	L	–	–	Nazarov & Ormiston 1984: 81	Upper Carboniferous	Gzhelian	Makyutov Complex, Tarangul River, Kosistek Village, Southern Ural, Kazakhstan
Latentidiota tripetalina	L	n.c.	–	Nazarov *in* Isakova & Nazarov 1986: 80	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Latentidiota visenda	L	–	T	Nazarov & Ormiston 1985: 29	Upper Carboniferous	Gzhelian	Maloik Formation, Don Village, Ural River, Orenburgskaya Region, S Urals, Russia
Latentidiota? ambigua	L	n.c.	–	Nazarov *in* Isakova & Nazarov 1986: 81	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
***Latentifistula* (184)**							
Latentifistula actinoteres	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 87	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Latentifistula astricta	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 88	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Latentifistula astricta astricta	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 89	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Latentifistula astricta? solida	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 90	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Latentifistula* (184) continuation**							
Latentifistula banchengensis	L	–	–	Wang *in* Wang *et al.* 2012: 109	Lower Permian	Artinskian	Bancheng Formation, SE Guangxi, China
Latentifistula brauni	L	–	–	Wang *in* Wang *et al.* 2012: 109	Upper Carboniferous	Gzhelian	Shijia Formation, Bancheng, Qinzhou area, Guangxi Zhuang Region, SW China
Latentifistula crux	L	–	T	Nazarov & Ormiston 1983b: 372	Upper Carboniferous	Gzhelian	E of Saraktash, Nikol Village, Ural River, Bashkirsk Region, Urals, Russia
Latentifistula densa	L	–	–	Nazarov & Ormiston 1985: 34	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Latentifistula hetroextrema	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 90	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Latentifistula mushroomformis	L	–	–	Wang *in* Wang *et al.* 2012: 109	Lower Permian	Artinskian	Bancheng Formation, SE Guangxi, China
Latentifistula muyinheensis	–	n.n.	–	Feng 1992: 55	Upper Permian	Changhsingian	Papai Formation of Changning-Menglian Belt, Papai Village, Cangyuan County, Yunnan, China
Latentifistula neotenica	L	–	T	Nazarov & Ormiston 1985: 33	Middle Permian	Roadian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Latentifistula patagilaterala	L	–	–	Nazarov & Ormiston 1985: 33	Middle Permian	Capitanian	Bell Canyon Formation, Hegler Limestone, Culberson County, W Texas, USA
Latentifistula similicutis	L	–	–	Caridroit & De Wever 1986: 78	Upper Permian	Wuchiapingian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Latentifistula texana	L	–	–	Nazarov & Ormiston 1985: 33	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Latentifistula torulosa	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 85	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Latentifistula torulosa ampliata	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 86	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Latentifistula triradiata	L	–	–	Wang 1993a: 451	Lower Permian	Kungurian	Gufeng Formation, Qiaotou Village, Chaou City, Anhui, China
Latentifistula valdeinepta	L	–	Ts	Nazarov & Ormiston 1985: 33	Lower Permian	Sakmarian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Liosphaera							
Liosphaera devoniensis	–	n.d.	–	Rüst 1892: 136	Lower Devonian	–	Southern Urals, Russia
Liosphaera mera	–	n.d.	–	Rüst 1892: 136	Lower Silurian	–	Cabrières, Hérault, France
Lithapium							
Lithapium claviformis	IS	–	–	Nazarov 1973b: 10	Lower Cambrian	Stage 2	Bograd Mountains, Betenevskiy area, Khakasiya Region, Russia
Lithapium siluricum	–	n.d.	–	Rüst 1892: 154	Lower Silurian	–	Cabrières, Hérault, France
Lithapium tesiensis	IS	–	–	Nazarov 1973b: 10	Lower Cambrian	Stage 2	Bograd Mountains, Betenevskiy area, Khakasiya Region, Russia
Lithatractus							
Lithatractus brevispinus	–	n.d.	–	Rüst 1892: 158	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Lithatractus mejeri	–	n.d.	–	Rüst 1892: 157	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Lithatractus perforatus	–	n.d.	–	Rüst 1892: 158	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Lithelius							
Lithelius difficilis	–	n.d.	–	Rüst 1892: 175	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Lithelius sinensis	S	–	–	Feng *in* Feng *et al.* 2006a: 35	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Lithocampe							
Lithocampe lossenii	–	n.d.	–	Rüst 1892: 189	Lower Devonian	–	Southern Urals, Russia
Lithocampe orenburgensis	–	n.d.	–	Rüst 1892: 188	Lower Devonian	–	Southern Urals, Russia
Lithocampe pyramis	–	n.d.	–	Rüst 1892: 189	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Lithocampe* (continuation)**							
Lithocampe sphaerocephalica	–	n.d.	–	Rüst 1892: 189	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Lithocampe stenostoma	–	n.d.	–	Rüst 1892: 189	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Lithocampe tschernytschewii	–	n.d.	–	Rüst 1892: 189	Lower Devonian	–	Southern Urals, Russia
Lithocampe tutata	–	n.d.	–	Rüst 1892: 190	Carboniferous	–	Bükk-Gebirge, Inner Western Carpathians, Hungary
Lithocampe? spinosa	–	n.d.	–	Ruedemann & Wilson 1936: 1579	Lower Ordovician	Floian	Normanskill chert, Fly Summit, Washington County, New York, USA
***Lithocannosphaeropsis* (296)**							
Lithocannosphaeropsis fallax	–	n.n.	Tn	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Lithocannosphaeropsis taylori	–	n.d.	–	Ormiston & Lane 1976: 175	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Lithocyclia							
Lithocyclia devoniensis	–	n.d.	–	Hinde & Fox 1895: 639	Carboniferous	Serpukhovian-Bashikirian	Codden Hill bed, Devon, England, UK
Lithocyclia macrococcus	E	–	T	Rüst 1892: 166	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Lithocyclia ulrichi	E	–	Ts	Rüst 1892: 166	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Lithomespilus							
Lithomespilus bipolaris	–	n.d.	–	Rüst 1892: 154	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Lithomespilus hexacanthus	–	n.d.	–	Rüst 1892: 153	Lower Silurian	–	Langenstriegis, Germany
Lithomespilus steinvorthi	–	n.d.	–	Rüst 1892: 154	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
***Lithosphaera* (44)**							
Lithosphaera oesensis	Ar	–	Th	Won 1998: 257	Lower Carboniferous	Tournaisian	Oese, Rheinische Schiefergebirge, Germany
Lithostrobus							
Lithostrobus wendlandi	–	n.d.	–	Rüst 1892: 187	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
***Longtanella* (36)**							
Longtanella mengshengensis	Al	n.n.	–	Feng 1992: 54	Upper Permian	Changhsingian	Gufeng Formation, Hubei, China
Longtanella turgida	Al	–	–	Feng 1992: 59	Middle Permian	Capitanian	Gufeng Formation, Hubei, China
Longtanella zhengpanshanensis	Al	–	Ts	Sheng & Wang 1985: 175, 179	Lower Permian	Kungurian	Gufeng Formation, N Mt. Konghshan, Hushan, Nanjing, China
***Magnentactinia* (99)**							
Magnentactinia fragilis	E	–	T	Won 1997a: 366	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Magnentactinia ostentata	E	–	–	Jones & Noble 2006: 297	MIddle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Magnentactinia? hexagonia	E	–	–	Park & Won 2012: 67	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
***Magnisphaera* (100)**							
Magnisphaera aitchisoniana	E	–	–	Won 1997a: 367	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Magnisphaera gigantea	E	–	T	Won 1997a: 368	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Magnisphaera imperfecta	E	–	–	Won 1997a: 368	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Megaporus* (297)**							
Megaporus jini	IS (O&F)	–	T	Feng *in* Feng *et al.* 2006c: S68	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Megaporus unicum	IS (O&F)	–	–	Feng *in* Feng *et al.* 2006c: S70	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Megaporus yangi	IS (O&F)	–	–	Feng *in* Feng *et al.* 2006c: S70	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Megaporus yini	IS (O&F)	–	–	Feng *in* Feng *et al.* 2006c: S69	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Meschedea* (101)**							
Meschedea akcetensis	E	–	–	Noble, Tekin, Gedik & Pehlivan 2008: 53	Lower Carboniferous	Tournaisian	Baltalimani Formation, Istanbul, Turkey
Meschedea crassicortex	E	–	–	Won 1997a: 360	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Meschedea hirsuta	E	–	–	Won 1983: 154	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Meschedea permica	E	–	–	Sashida & Tonishi 1985: 15	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Meschedea pyramispinosa	E	–	Ts	Won 1983: 154	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Meschedea? *endocarpa*	E	–	–	Nazarov & Ormiston 1993: 38	Middle Permian	Wordian	Bone Spring Formation, Guadalupe Mts., Culbertson County, W Texas, USA
***Microporosa* (102)**							
Microporosa aktastensis	E	–	–	Afanasieva & Amon 2016: 214	Lower Permian	Artinskian	Northern Mugodzhary, Aktasty River, Kazakhstan
Microporosa rozhnovi	E	–	–	Afanasieva & Amon 2016: 213	Lower Permian	Artinskian	Northern Mugodzhary, Aktasty River, Kazakhstan
***Moskovistella* (103)**							
Moskovistella allbori	E	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella allbori	E	n.n.	–	Afanasieva 1997b: 40	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella allbororum	E	–	–	Afanasieva 2000b: 138	Upper Devonian	middle Frasnian	Domanik Formation, borehole Ukhtinskaya-3B, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella baccata	E	–	–	Afanasieva 2000a: 67	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella khaini	E	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella khaini	E	n.n.	–	Afanasieva 1997b: 40	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella khaini	E	–	–	Afanasieva 2000b: 135	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella lucet	E	n.n.	–	Afanasieva 1997b: 40	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella lucet	E	–	–	Afanasieva 2000a: 68	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella mira	E	n.n.	–	Afanasieva 1997b: 40	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella mira	E	–	–	Afanasieva 2000b: 140	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Moskovistella* (103) continuation**							
Moskovistella octoradiata	E	–	T	Afanasieva 2000b: 136	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella rozanovi	E	n.n.	–	Afanasieva 1997b: 40	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella rozanovi	E	–	–	Afanasieva 2000b: 136	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella sincera	E	n.n.	–	Afanasieva 1997b: 40	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella sincera	E	–	–	Afanasieva 2000b: 135	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella viatoria	E	n.n.	–	Afanasieva 1997b: 40	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella viatoria	E	–	–	Afanasieva 2000b: 70	Upper Devonian	middle Frasnian	Domanik Formation, borehole Ukhtinskaya-3B, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella victorialis	E	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella victorialis	E	n.n.	–	Afanasieva 1997b: 40	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Moskovistella victorialis	E	–	–	Afanasieva 2000b: 138	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
***Mostlerispongus* (204)**							
Mostlerispongus sosioensis	L	–	T	Kozur 1993: 110	Upper Permian	Wuchiapingian	Sosio Valley Area, Torrente San Calogero, Western Sicily, Italy
***Mostlerium* (226)**							
Mostlerium unicum	N?	–	Ts	Cheng 1986: 136	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
***Multientactinia* (104)**							
Multientactinia inconstans	E	–	T	Won 1997b: 379	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Multientactinia iniqua	E	–	–	Won 1997b: 379	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Multientactinia iniqua cancellibasis	E	–	–	Won 1997b: 380	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Multientactinia iniqua iniqua	E	–	–	Won 1997b: 379	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Multientactinia reedae	E	–	–	Won 1997b: 380	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Multientactinia soluta	E	–	–	Won 1997b: 380	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
***Multisphaera* (164)**							
Multisphaera impersepta	E	–	T	Nazarov & Afanasieva *in* Afanasieva 2000c: 75	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
***Nabespecha* (191)**							
Nabespecha leonardia	L	–	Ts	Cornell & Simpson 1986: 285	Middle Permian	Roadian	Bone Spring Formation, Guadalupe Mts., Culbertson County, W Texas, USA
***Nazaromistonella* (20)**							
Nazaromistonella speciosus	Al	–	Ts	Furutani 1990: 53	Upper Silurian	Gorstian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Nazarovella* (192)**							
Nazarovella gracilis	L	–	Ts	De Wever & Caridroit 1984: 101	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Nazarovella inflata	L	–	–	Sashida & Tonishi 1986: 10	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Nazarovella phlogides	L	–	–	Wang *in* Wang & Li 1994: 206	Middle Permian	Capitanian	Dazong Range, Guangxi, Xiadong, Qinzhou area, China
Nazarovella scalae	L	–	–	Caridroit & De Wever 1986: 83	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
***Nazarovispongus* (211)**							
Nazarovispongus globosum	L	–	–	Nestell & Nestell 2010: 58	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Nazarovispongus pavlovi	L	–	Ts	Kozur 1980: 238	Lower Permian	Sakmarian	Sarabil Formation, Verchneozernaja Station, Orenburgskaya Region, Urals, Russia
Nazarovispongus permicus	L	–	–	Kozur 1980: 238	Lower Permian	Sakmarian	Sarabil Formation, Verchneozernaja Station, Orenburgskaya Region, Urals, Russia
***Nazarovites* (21)**							
Nazarovites aprelevkensis	Al	–	–	Afanasieva 2000c: 360	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Nazarovites bioculus	Al	–	Ts	Afanasieva 2000c: 364	Upper Devonian	middle Frasnian	Domanik Formation, outcrop 1904, Lyaiol River, Timan-Pechora Basin, Russia
Nazarovites mikhailovae	Al	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Nazarovites mikhailovae	Al	–	–	Afanasieva 2000c: 365	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Nazarovites pinnula	Al	–	–	Afanasieva 2000c: 365	Upper Devonian	middle Frasnian	Domanik Formation, outcrop 1904, Lyaiol River, Timan-Pechora Basin, Russia
***Neoalbaillella* (5)**							
Neoalbaillella antaixiangi	Al	–	–	Yao & Kuwahara 1999: 12	Upper Permian	Changhsingian	Dalong Formation, Changjianggou section, N of Shangsi, Sichuan, China
Neoalbaillella camarata	Al	–	–	Wu & Feng *in* Wu *et al.* 2010: 886	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Neoalbaillella cephalota	Al	–	–	Wu & Feng *in* Wu *et al.* 2010: 886	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Neoalbaillella cribrosa	Al	–	–	Rudenko & Panasenko 1990a: 121	Upper Permian	Changhsingian	Yastrebov Formation, Taukha Terrane, Primoriya, Russia
Neoalbaillella gracilis	Al	–	–	Takemura & Nakaseko 1981: 213	Upper Permian	Changhsingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Mt. Kurogara-dake, Takatsuki City, Osaka, Japan
Neoalbaillella grypus	Al	–	–	Ishiga, Kito & Imoto 1982a: 16	Upper Permian	Changhsingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Ubara section, Fukuchiyama City, Kyoto, Japan
Neoalbaillella minuta	Al	–	–	Jin & Feng *in* Jin *et al.* 2007: 16	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Neoalbaillella optima	Al	–	–	Ishiga, Kito & Imoto 1982a: 16	Upper Permian	Changhsingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Ubara section, Fukuchiyama City, Kyoto, Japan
Neoalbaillella ornithoformis	Al	–	T	Takemura & Nakaseko 1981: 211	Upper Permian	Changhsingian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Mt. Kurogara-dake, Takatsuki City, Osaka, Japan
Neoalbaillella pseudogrypus	Al	–	–	Sashida & Tonishi 1988: 527	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Neoaspiculum* (286)**							
Neoaspiculum cancellium	IS	–	–	Won & Iams 2011: 165	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Neoaspiculum echinatum	IS	–	–	Won & Iams 2015a: 29	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Neoaspiculum headense	IS	–	T	Won & Iams 2011: 165	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Neoaspiculum headense delicatum	IS	–	–	Won & Iams 2011: 168	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Neoaspiculum headense headense	IS	–	–	Won & Iams 2011: 165	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Neoaspiculum laxum	IS	–	–	Won & Iams 2011: 168	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Neoaspiculum transformum	IS	–	–	Won & Iams 2011: 168	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Neoaspiculum? amplum	IS	–	–	Won & Iams 2011: 168	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Neoaspiculum? maletziana	IS	–	–	Won & Iams 2015a: 29	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
***Neoechidnina* (56)**							
Neoechidnina compacta	Ar	–	T	Won & Iams 2015a: 15	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
***Neoholoeciscus* (22)**							
Neoholoeciscus cancermimus	Al	–	T	Ormiston & Lane 1976: 174	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
***Neopalaeospiculum* (65)**							
Neopalaeospiculum densum	Ar	–	–	Won, Iams & Reed 2007: 527	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Neopalaeospiculum laxum	Ar	–	T	Won, Iams & Reed 2007: 525	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Neopalaeospiculum transformum	Ar	–	–	Won, Iams & Reed 2007: 527	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
***Noblella* (61)**							
Noblella tremadociensis	Ar	–	Th, Ts	Kozur, Mostler & Repetski 1996: 255	Lower Ordovician	Tremadocian	Windfall Formation, Antelope Range, Eureka County, Nevada, USA
Nodocapsa							
Nodocapsa multipartita	n.r.	l.s.	Tnr	Wang 1989: 145	Lower Cambrian	–	Niutitang Formation, Sandu district, Guizhou Province, China
***Nyfrieslandia* (287)**							
Nyfrieslandia complicata	IS	–	–	Maletz & Bruton 2007: 281	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
Nyfrieslandia crassispinosa	IS	–	–	Won & Iams 2013: 30	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Nyfrieslandia sphaeroidea	IS	–	T	Maletz & Bruton 2007: 278	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
***Octatormentum* (201)**							
Octatormentum babcockae	L	–	–	Nazarov & Ormiston 1985: 43	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Octatormentum cornelli	L	–	T	Nazarov & Ormiston 1985: 42	Middle Permian	Roadian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Octatormentum floriferum	L	–	–	Sashida & Tonishi 1988: 533	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Octatormentum yaoi	L	–	–	Wu & Feng *in* Wu *et al.* 2010: 889	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
Odontosphaera							
Odontosphaera echinocactus	–	n.d.	–	Rüst 1892: 140	Lower Silurian	–	Cabrières, Hérault, France
***Orbiculopylorum* (253)**							
Orbiculopylorum adobensis	S	–	–	Noble, Ketner & McClellan 1997: 721	Lower Silurian	Rhuddanian	Cherry Spring Chert, Garden Pass, Roberts Mts. Allochthon, Nevada, USA
Orbiculopylorum granti	S	–	–	MacDonald 2006: 29	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Orbiculopylorum marginatum	S	–	T	Noble, Ketner & McClellan 1997: 719	Lower Silurian	Rhuddanian	Cherry Spring Chert, Garden Pass, Roberts Mts. Allochthon, Nevada, USA
Orbiculopylorum splendens	S	–	–	Noble, Ketner & McClellan 1997: 720	Lower Silurian	Rhuddanian	Cherry Spring Chert, Garden Pass, Roberts Mts. Allochthon, Nevada, USA
***Oriundogutta* (264)**							
Oriundogutta bella	S	–	–	Wang 1993c: 101	Upper Ordovician	Sandbian	Pinglian Formation, Horizon Pg 3, Yindongguan village, Pinglian County, Gansu, China
Oriundogutta litterula	S	–	–	Nazarov & Ormiston 1990: 18	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Oriundogutta litterula	S	–	–	Nazarov & Ormiston 1993: 36	Middle Silurian	Homerian	Maksyutov Complex, Tarangul River, 10 km N Kosistek Village, S Urals, Russia
Oriundogutta litterula	S	n.n.	–	Nazarov 1988: 122	Middle Silurian	Homerian	Maksyutov Complex, Tarangul River, 10 km N of Kosistek Village, S Urals, Russia
Oriundogutta miscella minuta	S	–	–	Wang 1993c: 101	Upper Ordovician	Sandbian	Pinglian Formation, Horizon Pg 3, Yindongguan village, Pinglian County, Gansu, China
Oriundogutta nazarovi	S	–	–	Wang 1993c: 102	Upper Ordovician	Sandbian	Pinglian Formation, Horizon Pg 3, Yindongguan village, Pinglian County, Gansu, China
Oriundogutta qilianenesis	S	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Oriundogutta? *kingi*	S	–	–	Noble 1994: 31	Upper Silurian	Gorstian	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA
Oriundogutta? *varispina*	S	–	–	Noble 1994: 31	Upper Silurian	Gorstian	Caballos Novaculite Formation, Monument Ck., Bourland Mts., Marathon Basin, W Texas, USA
***Ormistonella* (193)**							
Ormistonella adhaerens	L	–	–	Feng *in* Feng *et al.* 2006b: 845	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Ormistonella hickoryensis	L	–	–	Schwartzapfel & Holdsworth 1996: 216	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Hickory Creek section, Carter County, Oklahoma, USA
Ormistonella robusta	L	–	T	De Wever & Caridroit 1984: 100	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Ormistonella turgida	–	n.n.	–	Feng 1992: 55	Upper Permian	Changhsingian	Papai Formation of Changning-Menglian Belt, Papai Village, Cangyuan County, Yunnan, China
Ormistonella? *cylindrata*	L	–	–	Feng *in* Feng *et al.* 2006b: 845	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Ormistonia* (299)**							
Ormistonia pteracaena	–	n.n.	Td	Li 1991: 75	Upper Silurian	Gorstian	Mayila Complex, Keerhada, S Mayila Mt., Xinjiang, China
Ormistonia pteracaena	–	n.d.	Th, Td	Li 1994: 271	Upper Silurian	Gorstian	Keerhada, Mayila Mts., Xinjiang, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Ornatoentactinia* (106)**							
Ornatoentactinia agarkovi	E	–	–	Afanasieva 2000a: 56	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Ornatoentactinia beljaevorum	E	–	–	Afanasieva 2000a: 56	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Ornatoentactinia klevtsovae	E	–	–	Afanasieva 2000a: 57	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Ornatoentactinia solita	E	–	Ts	Afanasieva 2000c: 373	Upper Devonian	middle Frasnian	Domanik Formation, Locality 4, Ukhta River, Timan-Pechora Basin, Komi Region, Russia
Ornatoentactinia spartaci	E	–	–	Afanasieva 2000c: 374	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Ornatoentactinia spartaki	E	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Ornatoentactinia spinisica	E	–	–	Afanasieva 2000a: 57	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
***Ouaka* (185)**							
Ouaka asymmetrica	L	–	Ts	Cheng 1986: 176	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Ouaka ruesti	L	–	–	Cheng 1986: 177	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
***Pactarentinia* (147)**							
Pactarentinia holdsworthi	E	–	T	Furutani 1983: 109	Lower Devonian	Emsian	Nakahata Formation, S Mt. Yokokurayama, Ochi Town, Kochi, Shikoku, Japan
Pactarentinia igoi	E	–	–	Kurihara & Sashida 2000: 61	Lower Devonian	Emsian	Shibasudani Formation, Shibasudani Valley, Ohno City, Fukui Prefecture, Japan
Pactarentinia intermedia	E	–	–	Kurihara & Sashida 2000: 61	Lower Devonian	Emsian	Shibasudani Formation, Shibasudani Valley, Ohno City, Fukui Prefecture, Japan
***Palacantholithus* (40)**							
Palacantholithus crux	Al	n.n.	–	Deflandre 1973a: 291	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palacantholithus crux	Al	–	–	Deflandre 1973b: 499	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palacantholithus curvativus	Al	–	–	Afanasieva 2000a: 120	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Palacantholithus stellatus	Al	n.n.	–	Deflandre 1973a: 291	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palacantholithus stellatus	Al	–	T	Deflandre 1973b: 499	Lower Carboniferous	Visean	Cabrières, Hérault, France
***Palaeoactinosphaera* (300)**							
Palaeoactinosphaera antica	IS (O&F)	–	T	Noble 1994: 34	Upper Silurian	Gorstian	Caballos Novaculite Formation, East Bourland Mts., Marathon Basin, W Texas, USA
Palaeoactinosphaera asymmetrica	IS (O&F)	–	–	Noble 1994: 34	Middle Silurian	Homerian	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA
Palaeoactinosphaera barricki	IS (O&F)	–	–	Noble 1994: 34	Upper Silurian	Gorstian	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA
Palaeoactinosphaera elegantissima	IS (O&F)	–	–	Noble 1994: 35	Middle Silurian	Homerian	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA
Palaeoactinosphaera? crucispina	IS (O&F)	–	–	Noble 1994: 35	Middle Silurian	Homerian	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA
Palaeoactinosphaera? octaspina	IS (O&F)	–	–	Noble 1994: 35	Middle Silurian	Homerian	Caballos Novaculite Formation, East Bourland Mts., Marathon Basin, W Texas, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
Palaeocryptidium							
Palaeocryptidium cayeuxi	–	n.n.	–	Deflandre 1955: 184	Cambrian	–	Ville-au-Roi-en-Maroué, lamballe, Brittany, France
***Palaeodecaradium* (148)**							
Palaeodecaradium gordoni	E	–	–	MacDonald 2004: 268	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeodecaradium umbelliforme	E	–	T	Goodbody 1986: 136	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
***Palaeodiscaleksus* (333)**							
Palaeodiscaleksus saturniformis	n.r.	–	–	Afanasieva & Amon 2011: 1511	Middle Devonian	Givetian	Shipunikha Formation, Zmeinogorskii District, Shipunikha River, Rudny Altai, West Siberia, Russia
Palaeodiscaleksus shuldakensis	n.r.	–	–	Afanasieva & Amon 2012: 550	Middle Devonian	Givetian	Shuldak Formation, Shuldak River, western Mugodzhary, Kazakhstan
Palaeodiscaleksus tumefactus	n.r.	–	–	Afanasieva & Amon 2008: 462	Middle Devonian	Upper Eifelian	Kariyukmas Mountain, NW Staryi Sibai, Southern Ural, Russia
Palaeoellipsoides							
Palaeoellipsoides convexocylindratus	L	n.d.	–	Afanasieva & Amon 2012: 550	Middle Devonian	Givetian	Shuldak Formation, Shuldak River, western Mugodzhary, Kazakhstan
Palaeoellipsoides planoconvexus	L	n.d.	–	Afanasieva & Amon 2012: 550	Middle Devonian	Givetian	Shuldak Formation, Shuldak River, western Mugodzhary, Kazakhstan
***Palaeoephippium* (149)**							
Palaeoephippium adraini	E	–	–	MacDonald 1999: 2056	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium aranea	E	–	–	Goodbody 1986: 138	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium bifurcum	E	–	T	Goodbody 1986: 139	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium dissimile	E	–	T	Goodbody 1986: 140	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium echinatum	E	–	–	Goodbody 1986: 140	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium fimbriatum	E	–	–	Goodbody 1986: 142	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium fukujiensis	E	–	–	Furutani 1990: 46	Upper Silurian	Pridoli	Yoshiki Formation, Hida-gaien Belt, Osobudani Valle, Fukuji area, Takayama City, Gifu, Japan
Palaeoephippium irregulum	–	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Palaeoephippium multiramosum	E	–	–	Goodbody 1986: 142	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium octaramosum	E	–	–	Renz 1990: 370	Upper Ordovician	Katian	Hanson Creek Formation, N Martin Ridge, Eureka County, Nevada, USA
Palaeoephippium pariradiatum	E	–	–	Goodbody 1986: 143	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium pariramosum	E	–	–	Goodbody 1986: 143	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium plattum	E	n.c.	–	Goto, Umeda & Ishiga 1992: 164	Upper Ordovician	Katian	Malongulli Formation, Lachlan Fold Belt, 30 km NW of Taralga, NSW, Australia
Palaeoephippium radices	E	–	–	Goodbody 1986: 144	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Palaeoephippium* (149) continuation**							
Palaeoephippium ramipendentes	E	–	–	Goodbody 1986: 146	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium reteforme	E	–	–	Goodbody 1986: 146	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium spinosum	E	–	–	Goodbody 1986: 147	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium tricorne	E	–	–	Goodbody 1986: 147	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoephippium unipariradiatum	–	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
***Palaeolithochytris* (318)**							
Palaeolithochytris lethaea	–	n.d.	–	Li 1995: 336	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Palaeolithochytris olenus	–	n.d.	Td	Li 1995: 336	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
***Palaeolithocyclia* (139)**							
Palaeolithocyclia pilata	E	–	–	Feng *in* Feng *et al.* 2009: 143	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Palaeolithocyclia platta	E	–	–	Feng *in* Feng *et al.* 2009: 143	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Palaeopentactinorbis* (107)**							
Palaeopentactinorbis longispinous	E	–	Ts	Kozur & Mostler 1989: 195	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
***Palaeopyramidium* (150)**							
Palaeopyramidium arcuatum	E	–	–	Amon, Braun & Ivanov 1995: 6	Upper Silurian	Gorstian	Maksyutov Complex, Tarangul River, 10 km N of Kosistek Village, S Urals, Russia
Palaeopyramidium furutanium	–	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Palaeopyramidium ramosum	E	–	–	Kurihara & Sashida 2000: 62	Lower Devonian	Emsian	Shibasudani Formation, Shibasudani Valley, Ohno City, Fukui Prefecture, Japan
Palaeopyramidium spinosum	E	–	T	Goodbody 1986: 148	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
***Palaeorubus* (343)**							
Palaeorubus hastingensis	n.r.	Calc-area	Tnr	Ishiga *in* Ishiga *et al.* 1987: 300	Upper Devonian	Frasnian	Yarras, Hastings block, New England fold belt, NSW Australia
***Palaeoscenidium* (151)**							
Palaeoscenidium apertum	E	–	–	Goodbody 1986: 150	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoscenidium appendium	E	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Palaeoscenidium bicorne	E	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palaeoscenidium bispina	E	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Palaeoscenidium cancellatum	E	–	–	Goodbody 1986: 150	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoscenidium cladophorum	E	–	T	Deflandre 1953: 408	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Palaeoscenidium daktylethra	E	–	–	Aitchison 1993b: 122	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Palaeoscenidium* (151) continuation**							
Palaeoscenidium delicatum	E	–	–	Aitchison 1993b: 122	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Palaeoscenidium deweveri	E	–	–	Gourmelon 1987: 127	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Palaeoscenidium echinatum	E	–	–	Aitchison 1993b: 122	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Palaeoscenidium flammatum	E	–	Ts	Goodbody 1986: 152	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoscenidium fragilis	E	–	–	Kurihara & Sashida 2000: 60	Lower Devonian	Emsian	Shibasudani Formation, Shibasudani Valley, Ohno City, Fukui Prefecture, Japan
Palaeoscenidium hakogasensis	E	–	–	Kurihara & Sashida 2000: 60	Lower Devonian	Emsian	Shibasudani Formation, Shibasudani Valley, Ohno City, Fukui Prefecture, Japan
Palaeoscenidium ishigai	E	–	–	Wakamatsu, Sugiyama & Furutani 1990: 166	Lower Devonian	Pragian	Jyoru Formation, Kurosegawa Belt, Konomori area, Kochi City, Shikoku, Japan
Palaeoscenidium kuriharai	E	–	–	Umeda & Suzuki 2005: 85	Lower Silurian	Aeronian	Kallholn Formation, Solberga Quarry of Boda, Siljan area, Dalarna, Sweden
Palaeoscenidium nudum	E	–	–	Aitchison 1993b: 122	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Palaeoscenidium phalangium	E	–	–	Aitchison 1993b: 123	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Palaeoscenidium rarispinosum	E	–	–	Goodbody 1986: 152	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeoscenidium robustum	E	–	–	Aitchison 1993b: 123	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Palaeoscenidium scaurum	E	–	–	Afanasieva 2000c: 366	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Palaeoscenidium schaafi	E	–	–	Gourmelon 1987: 128	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Palaeoscenidium simplum	E	–	–	Kurihara & Sashida 2000: 59	Lower Devonian	Emsian	Shibasudani Formation, Shibasudani Valley, Ohno City, Fukui Prefecture, Japan
Palaeoscenidium tabernaculum	E	–	–	Aitchison 1993b: 123	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Palaeoscenidium venustum	E	–	–	Aitchison 1993b: 123	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Palaeoscenidium? quadriramosum	E	–	–	Foreman 1963: 304	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
***Palaeosphaera* (70)**							
Palaeosphaera micra	Ar	–	Ts	Renz 1990: 372	Upper Ordovician	Katian	Hanson Creek Formation, N Martin Ridge, Eureka County, Nevada, USA
***Palaeospiculum* (66)**							
Palaeospiculum arcussimile	Ar	–	–	Won *in* Won & Below 1999: 340	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Palaeospiculum burkensis	Ar	–	T	Won *in* Won & Below 1999: 340	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Palaeospiculum curvum	Ar	–	–	Won, Iams & Reed 2005: 451	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Palaeospiculum dendroeides	Ar	–	–	Won *in* Won & Below 1999: 341	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Palaeospiculum devoncourtensis	Ar	–	–	Won *in* Won & Below 1999: 341	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Palaeospiculum georginaensis	Ar	–	–	Won *in* Won & Below 1999: 341	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Palaeospiculum* (66) continuation**							
Palaeospiculum greenpointensis	Ar	–	–	Won & Iams 2002: 27	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Palaeospiculum grosmornensis	Ar	–	–	Won & Iams 2002: 27	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Palaeospiculum hexaradiatum	Ar	–	–	Won & Iams 2002: 28	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Palaeospiculum martinpointensis	Ar	–	–	Won & Iams 2002: 28	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Palaeospiculum multifurcatum	Ar	–	–	Won, Iams & Reed 2005: 451	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Palaeospiculum neofurcatum	Ar	–	–	Won, Iams & Reed 2005: 451	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Palaeospiculum parvum	Ar	–	–	Won *in* Won & Below 1999: 346	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Palaeospiculum radiatum	Ar	–	–	Won *in* Won & Below 1999: 348	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Palaeospiculum reedae	Ar	–	–	Won *in* Won & Below 1999: 350	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Palaeospiculum solutum	Ar	–	–	Won & Iams 2015a: 13	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Palaeospiculum tetractinum	Ar	–	–	Won, Iams & Reed 2005: 453	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Palaeospiculum tetraradiatum	Ar	–	–	Won & Iams 2002: 28	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Palaeospiculum variabile	Ar	–	–	Won & Iams 2015a: 13	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Palaeospiculum? discordiosum	Ar	–	–	Won & Iams 2015a: 14	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
***Palaeothalomnus* (152)**							
Palaeothalomnus antiquus	IS (O&F)	n.n.	–	Deflandre 1973a: 290	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palaeothalomnus antiquus	IS (O&F)	–	T	Deflandre 1973b: 498	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palaeothalomnus piletocladus	IS (O&F)	–	–	Nazarov & Ormiston 1993: 50	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Palaeothalomnus piletocladus	IS (O&F)	n.n.	–	Nazarov 1988: 130	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Palaeothalomnus timokhini	IS (O&F)	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Palaeothalomnus timokhini	IS (O&F)	–	–	Afanasieva 2000c: 366	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
***Palaeotrifidus* (153)**							
Palaeotrifidus ballator	E	–	Ts	Renz 1990: 374	Upper Ordovician	Katian	Hanson Creek Formation, N Martin Ridge, Eureka County, Nevada, USA
Palaeotrifidus imbifurcus	E	–	–	Renz 1990: 374	Upper Ordovician	Katian	Hanson Creek Formation, N Martin Ridge, Eureka County, Nevada, USA
***Palaeotripus* (154)**							
Palaeotripus cancellatus	E	–	–	Goodbody 1986: 153	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeotripus gogoense	E	–	–	Aitchison 1993b: 124	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Palaeotripus impariramosus	E	–	–	Goodbody 1986: 153	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeotripus monospinosus	E	–	–	Goodbody 1986: 153	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Palaeotripus nudus	E	–	T	Goodbody 1986: 154	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Palaeotripus* (154) continuation**							
Palaeotripus ramalinus	E	–	–	Goto, Umeda & Ishiga 1992: 163	Upper Ordovician	Katian	Malongulli Formation, Lachlan Fold Belt, 30 km NW of Taralga, NSW, Australia
Palaeotripus sexabrachiatus	E	–	–	Renz 1990: 376	Upper Ordovician	Katian	Hanson Creek Formation, N Martin Ridge, Eureka County, Nevada, USA
Palaeotripus simplum	E	n.c.	–	Goto, Umeda & Ishiga 1992: 165	Upper Ordovician	Katian	Malongulli Formation, Lachlan Fold Belt, 30 km NW of Taralga, NSW, Australia
Palaeotripus tetractinos	–	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
***Palaeoumbraculum* (155)**							
Palaeoumbraculum expandum	E	–	T	Amon, Braun & Ivanov 1995: 8	Upper Silurian	Gorstian	Maksyutov Complex, Tarangul River, 10 km N of Kosistek Village, S Urals, Russia
Palaeoumbraculum hidense	E	–	–	Kurihara & Sashida 2000: 63	Lower Devonian	Emsian	Shibasudani Formation, Shibasudani Valley, Ohno City, Fukui Prefecture, Japan
***Palaeoxyphostylus* (108)**							
Palaeoxyphostylus variospina	E	–	T	Won 1983: 156	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
***Palamphimorphium* (319)**							
Palamphimorphium speciosum	–	n.n.	Tn	Ters & Deflandre 1966: 340	Ordovician	–	Phtanites d'Angers, Vendée, France
***Paleocenosphaera* (320)**							
Paleocenosphaera magna	–	n.d.	Td	Nazarov 1973b: 8	Lower Cambrian	Stage 2	Bograd Mountains, Betenevskiy area, Khakasiya Region, Russia
Paleocenosphaera parva	–	n.d.	–	Nazarov 1973b: 9	Lower Cambrian	Stage 2	Bograd Mountains, Betenevskiy area, Khakasiya Region, Russia
***Paleoxiphosphaera* (109)**							
Paleoxiphosphaera erbiensis	IS	–	Ts	Nazarov 1973b: 9	Lower Cambrian	Stage 2	Bograd Mountains, Betenevskiy area, Khakasiya Region, Russia
***Palhindeolithus* (321)**							
Palhindeolithus ambiguus	IS	n.n.	–	Deflandre 1973a: 291	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palhindeolithus ambiguus	IS	–	T	Deflandre 1973b: 498	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palhindeolithus bibiceps	IS	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Palhindeolithus bitrispinosus	IS	n.n.	–	Deflandre 1973a: 290	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palhindeolithus bitrispinosus	IS	n.d.	–	Deflandre 1973b: 498	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palhindeolithus cnidus	IS	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Palhindeolithus diductus	IS	n.n.	–	Deflandre 1973a: 291	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palhindeolithus diductus	IS	n.d.	–	Deflandre 1973b: 498	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palhindeolithus ditetrablastus	IS	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Palhindeolithus pulcher	IS	n.n.	–	Deflandre 1973a: 291	Lower Carboniferous	Visean	Cabrières, Hérault, France
Palhindeolithus pulcher	IS	n.d.	–	Deflandre 1973b: 498	Lower Carboniferous	Visean	Cabrières, Hérault, France
***Papinochium* (322)**							
Papinochium dubium	–	n.n.	Tn	Ters & Deflandre 1966: 340	Ordovician	–	Phtanites d'Angers, Vendée, France

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Parabeothuka* (237)**							
Parabeothuka haeckeliana	S	–	–	Won & Iams 2015a: 28	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Parabeothuka transformis	S	–	T	Won & Iams 2015a: 27	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
***Paracopicyntra* (245)**							
Paracopicyntra longispina	S	–	–	Feng *in* Feng *et al.* 2006a: 25	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Paracopicyntra puncta	S	–	–	Maldonado & Noble 2010: 104	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Paracopicyntra simplex	S	–	–	Feng *in* Feng *et al.* 2006a: 25	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Paracopicyntra snyderi	S	–	–	Nestell & Nestell 2010: 24	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
***Parafollicucullus* (37)**							
Parafollicucullus cornelli	Al	–	–	Kozur & Mostler 1989: 175	Middle Permian	Roadian	Bone Spring Formation, Guadalupe Mts., Culbertson County, W Texas, USA
Parafollicucullus fusiformis	Al	–	Ts	Holdsworth & Jones 1980: 285	Middle Permian	Roadian	Mankomen Group, Clearwater Mountains, USGS MR loc. 0435, Alaska Range, USA
Parafollicucullus sakmarensis	Al	–	Ts	Kozur 1981: 266	Lower Permian	Sakmarian	Sarabil Formation, Kondurovska, Orenburgskaya Region, S Urals, Russia
Parafollicucullus? nazarovi	Al	–	–	Kozur 1981: 266	Lower Permian	Sakmarian	Sarabil Formation, Kondurovska, Orenburgskaya Region, S Urals, Russia
***Paraholoeciscus* (23)**							
Paraholoeciscus bingaraensis	Al	–	Ts	Aitchison 1993a: 363	Upper Devonian	Famennian	Djungati terrane, Bingara region, New England orogen, NSW, Australia
***Paramphibrachium* (140)**							
Paramphibrachium woni	E	–	–	Feng *in* Feng *et al.* 2009: 143	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Pararcheoentactinia* (45)**							
Pararcheoentactinia parastilla	Ar	–	–	Won & Iams 2015a: 11	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Pararcheoentactinia reedae	Ar	–	T	Won & Iams 2002: 13	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Pararcheoentactinia stilla	Ar	–	–	Won, Iams & Reed 2007: 505	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Pararcheoentactinia? cowheadensis	Ar	–	–	Won, Iams & Reed 2005: 438	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Pararcheoentactinia? impedita	Ar	–	–	Won & Iams 2002: 17	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
***Pararchocyrtium* (227)**							
Pararchocyrtium mirabile	N?	n.n.	–	Deflandre 1972a: 3539	Lower Carboniferous	Visean	Cabrières, Hérault, France
Pararchocyrtium mirabile	N?	–	T	Deflandre 1972b: 15	Lower Carboniferous	Visean	Cabrières, Hérault, France
***Parasecuicollacta* (71)**							
Parasecuicollacta bipola	Ar	–	Ts	Won, Blodgett & Nestor 2002: 953	Lower Silurian	Telychian	Road River Formation, subsidiary channel of Tatonduck River, east-central Alaska, USA
Parasecuicollacta hexactina	Ar	–	–	Won, Blodgett & Nestor 2002: 953	Lower Silurian	Telychian	Road River Formation, subsidiary channel of Tatonduck River, east-central Alaska, USA
Parasecuicollacta multispinosa	Ar	–	–	Won, Blodgett & Nestor 2002: 953	Lower Silurian	Telychian	Road River Formation, subsidiary channel of Tatonduck River, east-central Alaska, USA
Parasecuicollacta nannoglobosa	Ar	–	–	Won, Blodgett & Nestor 2002: 953	Lower Silurian	Telychian	Road River Formation, subsidiary channel of Tatonduck River, east-central Alaska, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Parechidnina* (57)**							
Parechidnina delicata	Ar	–	–	Won, Iams & Reed 2005: 443	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Parechidnina densa	Ar	–	–	Maletz & Bruton 2007: 276	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
Parechidnina imperfecta	Ar	–	–	Won & Iams 2015a: 28	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Parechidnina jamesi	Ar	–	–	Won & Iams 2002: 30	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Parechidnina nevadensis	Ar	–	T	Kozur, Mostler & Repetski 1996: 250	Lower Ordovician	Tremadocian	Windfall Formation, Antelope Range, Eureka County, Nevada, USA
Parechidnina variospina	Ar	–	–	Won, Iams & Reed 2005: 445	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Parentactinia							
Parentactinia vetustum	E	–	T	Furutani 1983: 108	Lower Devonian	Emsian	Nakahata Formation, S Mt. Yokokurayama, Ochi Town, Kochi, Shikoku, Japan
Paronaella							
Paronaella impella	L	–	Ts	Ormiston & Lane 1976: 169	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Paronaella turgida	L	–	–	Ormiston & Lane 1976: 169	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Paronaella? triporosa	L	–	–	Holdsworth & Murchey 1988: 788	Upper Carboniferous	Bashkirian	Kuna Formation, Nigu Bluff, Northern Brooks Range, Alaska, USA
***Parvalanapila* (72)**							
Parvalanapila fleischerorum	Ar	–	Ts	MacDonald 1998: 599	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Pentalastrum							
Pentalastrum primitivum	–	n.d.	–	Rüst 1892: 172	Carboniferous	–	Bükk-Gebirge, Inner Western Carpathians, Hungary
***Perforentactinia* (111)**							
Perforentactinia excepta	E	–	T	Jones & Noble 2006: 298	MIddle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Peripanartus							
Peripanartus deficiens	–	n.d.	–	Rüst 1892: 161	Lower Devonian	–	Southern Urals, Russia
Phaenicosphaera							
Phaenicosphaera mammilla	S	–	–	Sheng & Wang 1985: 176, 179-180	Lower Permian	Kungurian	Gufeng Formation, N Mt. Konghshan, Hushan, Nanjing, China
Phaenoscenium							
Phaenoscenium excentricum	–	n.d.	–	Rüst 1892: 179	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Phorticium							
Phorticium macropylium	–	n.d.	–	Rüst 1892: 175	Lower Silurian	–	Cabrières, Hérault, France
Plagiacantha							
Plagiacantha australis	–	n.d.	–	Hinde 1899a: 56	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Plagiocantha nana	–	n.d.	–	Bykova 1955: 72	Upper Devonian	Frasnian	Domanik Formation, Tatarstan, Russia
Plagoniscus							
Plagoniscus colligatus	–	n.d.	–	Hinde 1899a: 56	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Plagoniscus cristatus	–	n.d.	–	Hinde 1899a: 56	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Plagoniscus simplex	–	n.d.	–	Hinde 1899a: 56	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Plagoniscus vetustus	–	n.d.	–	Hinde 1899a: 57	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
Plegmosphaera							
Plegmosphaera spiculata	–	n.d.	–	Aberdeen 1940: 134	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
***Plenoentactinia* (112)**							
Plenoentactinia concreta	E	–	–	Won 1997b: 381	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Plenoentactinia gourmelonae	E	–	–	Won 1998: 244	Lower Carboniferous	Tournaisian	Oese, Rheinische Schiefergebirge, Germany
Plenoentactinia pinguis	E	–	–	Won 1997b: 381	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Plenoentactinia sexangula	E	–	T	Won 1997b: 382	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Plenoentactinia stella	E	–	–	Won 1997b: 382	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
***Plenosphaera* (113)**							
Plenosphaera gigantea	E	–	–	Park & Won 2012: 57	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Plenosphaera usitata	E	–	–	Park & Won 2012: 57	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Plenosphaera? tenuitesta	E	–	–	Park & Won 2012: 58	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
***Pluristratoentactinia* (114)**							
Pluristratoentactinia conspissata	E	–	T	Nazarov *in* Nazarov *et al.* 1981: 87	Upper Devonian	Famennian	Duksundinsk Formation, along Duksunda River, Magadan, Russia
Pluristratoentactinia trisphaerata	E	–	–	Afanasieva & Amon 2011: 1509	Upper Devonian	lower Famennian	Polar Urals, Palnik Yu River, Russia
***Plussatispila* (265)**							
Plussatispila aethra	S	–	–	Jones & Noble 2006: 308	MIddle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Plussatispila cornwallisensis	S	–	–	MacDonald 2006: 34	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Plussatispila delicata	S	–	–	MacDonald 2006: 34	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Plussatispila magnilimax	S	–	T	MacDonald 2006: 33	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Plussatispila pellicia	S	–	–	MacDonald 2006: 35	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
***Polyedroentactinia* (115)**							
Polyedroentactinia cisuralica	E	–	T	Kozur & Mostler 1989: 194	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Polyedroentactinia guadalupensis	E	–	–	Nestell & Nestell 2010: 22	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Polyedroentactinia quadrata	E	–	–	Maldonado & Noble 2010: 86	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
***Polyentactinia* (161)**							
Polyentactinia amplictibrosa	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 108	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Polyentactinia applanata	E	–	–	Nazarov & Ormiston 1989: 18	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Polyentactinia aranaeosa	E	–	–	Nazarov & Ormiston 1984: 70	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Polyentactinia aranea	E	–	–	Gourmelon 1987: 77	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Polyentactinia* (161) continuation**							
Polyentactinia centrata	E	–	–	Nazarov & Ormiston 1985: 43	Middle Permian	Roadian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Polyentactinia circumretia	E	–	–	Nazarov & Ormiston 1990: 22	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Polyentactinia circumretia	E	inv.	–	Nazarov & Ormiston 1993: 46	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Polyentactinia circumretia	E	n.n.	–	Nazarov 1988: pl 14 fig. 1	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Polyentactinia craticulata	E	–	T	Foreman 1963: 281	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Polyentactinia djagdiensis	E	–	–	Nazarov *in* Nazarov & Shkolnik 1974: 106	Middle Cambrian	–	Dzhagdish, between Nim and Dzharovdik River, Khabarovsk, Russia
Polyentactinia fiscina	E	–	–	Nazarov & Ormiston 1989: 17	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Polyentactinia fragilis	E	–	–	Nazarov & Ormiston 1989: 17	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Polyentactinia hunanensis	E	–	–	Dong, Knoll & Lipps 1997: 754	Upper Cambrian	Paibian	Bitiao Formation, Paibi Village, Huayuan County, Hunan, China
Polyentactinia invenusta	E	–	–	Aitchison 1993b: 117	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Polyentactinia ishigai	E	–	–	Kozur & Mostler 1989: 195	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Polyentactinia kossistekensis	E	–	–	Nazarov 1975: 78	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Polyentactinia lautitia	E	–	–	Nazarov & Ormiston 1985: 43	Lower Permian	Artinskian	Aktastyi River, Orenburgskaya region, Southern Urals, Russia
Polyentactinia leptosphaera	E	–	–	Foreman 1963: 281	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Polyentactinia miopora	E	–	–	Wang *in* Wang *et al.* 2000: 248	Middle Devonian	Givetian	Changyucun Formation, Shaijingpo section, Xianyun County, Yunnan, China
Polyentactinia multifida	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 106	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Polyentactinia multifora	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 107	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Polyentactinia njatvica	E	–	–	Nazarov & Ormiston 1990: 23	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Polyentactinia nyatvica	E	inv.	–	Nazarov & Ormiston 1993: 48	Upper Carboniferous	Moscovian	Popovka River in Prikolyma area, Magadan Region, Russia
Polyentactinia nyatvica	E	n.n.	–	Nazarov 1988: 139	Upper Carboniferous	Moscovian	Popovka River in Prikolyma area, Magadan Region, Russia
Polyentactinia octupla	E	–	–	Nazarov *in* Isakova & Nazarov 1986: 105	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Polyentactinia offerta	E	–	–	Nazarov *in* Nazarov & Popov 1980: 42	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Polyentactinia offirmata	E	–	–	Nazarov & Ormiston 1989: 18	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Polyentactinia polygonia	E	–	–	Foreman 1963: 281	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Polyentactinia propinqua	E	–	–	Nazarov 1975: 79	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Polyentactinia rudihispida	E	–	–	Nazarov & Ormiston 1993: 48	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Polyentactinia rudihispida	E	n.n.	–	Nazarov 1988: 132	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Polyentactinia sexangulata	E	–	–	Feng, Mei & Zhang 1997: 89	Lower Carboniferous	Visean	Changning-Menglian Zone, SE of Gengma, Yunnan, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Polyentactinia* (161) continuation**							
Polyentactinia spinulenta	E	–	–	Pouille & Danelian *in* Pouille *et al.* 2014: 156	Middle Ordovician	upper Darriwilian	Shundy Formation, Balkhash region, Kazakhstan
Polyentactinia tenera	E	–	–	Aitchison 1993b: 117	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Polyentactinia tortispina	E	–	–	Ormiston & Lane 1976: 166	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Polyentactinia zhamoidai	E	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Polyentactinia zhamoidai	E	–	–	Afanasieva 2000a: 38	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Polyentactinia? coldinensis	E	–	–	Nazarov 1975: 80	Middle Cambrian	–	Agyirsksk Formation, Mukhyr River, Chingiz Mountain range, eastern Kazakhstan
Polyentactinia? estonica	E	–	–	Nazarov *in* Nazarov & Nolvak 1983: 5	Upper Ordovician	Hirnantian	Sau'yask Formation, Bore hole Eikla, Saaremaa, Estonia
Polyentactinia? helioformis	E	–	–	Kozur & Mostler 1989: 194	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Polyentactinia? leeorum	E	–	–	Goodbody 1986: 156	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Polyentactinia? nazarovi	E	–	–	Kozur & Mostler 1989: 195	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Polyentactinia? perampla	E	–	–	Braun, Maass & Schmidt-Effing 1992: 172	Upper Devonian	Famennian	Breuschtal, northern Vosges, Alsace, France
Polyentactinia? plecta	E	–	–	Foreman 1963: 282	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Polyentactinia? stelcki	E	–	–	Goodbody 1986: 156	Middle Silurian	Sheinwoodian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Polyentactinia? udiensis	E	–	–	Nazarov *in* Nazarov & Shkolnik 1974: 107	Middle Cambrian	–	Dzhagdish, between Nim and Dzharovdik River, Khabarovsk, Russia
***Polyfistula* (195)**							
Polyfistula hexalobata	L	–	–	Nazarov & Ormiston 1989: 13	Lower Permian	Artinskian	Havallah Formation, Cedar Mts., Lander County, Nevada, USA
Polyfistula longiquitas	L	–	T	Nazarov & Ormiston 1984: 80	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Polyfistula novem	L	–	–	Noble & Renne 1990: 388	Middle Permian	Roadian	Dekkas Formation, Eastern Klamath Mountains, California, USA
Polyfistula regularis	L	–	–	Feng *in* Feng *et al.* 2006b: 846	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Polyfistula? grantmackiei	L	–	–	Sashida *in* Sashida *et al.* 2000a: 85	Upper Permian	Changhsingian	Fang Chert, Quarry of Ban Huai Tian Tang, Chiang Mai, Thailand
***Popofskyellum* (231)**							
Popofskyellum annulatum	N?	–	–	Deflandre 1964: 3056	Lower Carboniferous	Visean	Cabrières, Hérault, France
Popofskyellum aspinosum	N?	–	–	Won 1998: 247	Lower Carboniferous	Tournaisian	Oese, Rheinische Schiefergebirge, Germany
Popofskyellum bispina	N?	–	–	Park & Won 2012: 60	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Popofskyellum campanella	N?	–	–	Won 1983: 157	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Popofskyellum conicum	N?	–	–	Deflandre 1964: 3056	Lower Carboniferous	Visean	Cabrières, Hérault, France
Popofskyellum crinerensis	N?	–	–	Schwartzapfel & Holdsworth 1996: 134	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Popofskyellum daisyensis	N?	–	–	Cheng 1986: 153	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Popofskyellum* (231) continuation**							
Popofskyellum deflandrei	N?	–	–	Cheng 1986: 154	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Popofskyellum delicatum	N?	–	–	Cheng 1986: 154	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Popofskyellum dumitricai	N?	–	–	Cheng 1986: 155	Lower Carboniferous	Bashkirian	Jones Valley Shale, Le Flore County, eastern Oklahoma, USA
Popofskyellum elmense	N?	–	–	Cheng 1986: 156	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Popofskyellum hendricksi	N?	–	–	Cheng 1986: 156	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Popofskyellum obesum	N?	–	–	Cheng 1986: 157	Lower Carboniferous	Bashkirian	Jones Valley Shale, Le Flore County, eastern Oklahoma, USA
Popofskyellum pulchrum	N?	n.n.	T	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Popofskyellum pulchrum	N?	n.n.	–	Deflandre 1964: 3056	Lower Carboniferous	Visean	Cabrières, Hérault, France
Popofskyellum robustum	N?	–	–	Cheng 1986: 157	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Popofskyellum tardicarboniferum	N?	–	–	Nazarov *in* Isakova & Nazarov 1986: 118	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Popofskyellum triportium	N?	–	–	Won 1990: 138	Lower Carboniferous	Visean	Riescheid Section, Wuppertal-Barmen, Germany
Popofskyellum turpiculum	N?	–	–	Cheng 1986: 158	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Popofskyellum undulatum	N?	–	–	Deflandre 1964: 3056	Lower Carboniferous	Visean	Cabrières, Hérault, France
Popofskyellum wonae	N?	–	–	Cheng 1986: 159	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Popofskyellum? procerulum	N?	–	T	Nazarov *in* Nazarov & Popov 1980: 68	Middle Ordovician	Darriwilian	Kizyilzarsk Formation, area between Moyynty and Zhamishinsk Rivers, Kazakhstan
Porodiscus							
Porodiscus brevis	–	n.d.	–	Hinde & Fox 1895: 640	Carboniferous	Serpukhovian-Bashkirian	Codden Hill bed, Devon, England, UK
Porodiscus cabrierensis	–	n.d.	–	Rüst 1892: 168	Lower Silurian	–	Cabrières, Hérault, France
Porodiscus clathratus	–	n.d.	–	Hinde & Fox 1895: 640	Carboniferous	Serpukhovian-Bashkirian	Codden Hill bed, Devon, England, UK
Porodiscus intricatus	–	n.d.	–	Rüst 1892: 168	Lower Devonian	–	Southern Urals, Russia
Porodiscus lens	–	n.d.	–	Hinde & Fox 1895: 640	Carboniferous	Serpukhovian-Bashkirian	Codden Hill bed, Devon, England, UK
Porodiscus percinctus	–	n.d.	–	Hinde & Fox 1895: 640	Carboniferous	Serpukhovian-Bashkirian	Codden Hill bed, Devon, England, UK
Porodiscus rossicus	–	n.d.	–	Rüst 1892: 168	Lower Devonian	–	Southern Urals, Russia
***Praedeflandrella* (175)**							
Praedeflandrella firmata	L	–	–	Maldonado & Noble 2010: 88	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Praedeflandrella prolata	L	–	–	Maldonado & Noble 2010: 88	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
***Praesaturnalis* (156)**							
Praesaturnalis octoacicula	–	n.n.	–	Li 1991: 75	Upper Silurian	Gorstian	Mayila Complex, Keerhada, S Mayila Mt., Xinjiang, China
Praesaturnalis octoaculeatus	E	–	–	Li 1994: 262	Lower Devonian	Emsian	Keerhada, Mayila Mts., Xinjiang, China
Praesaturnalis septemistella	–	n.n.	–	Li 1991: 75	Upper Silurian	Gorstian	Mayila Complex, Keerhada, S Mayila Mt., Xinjiang, China
Praesaturnalis septemistellatus	E	–	Ts	Li 1994: 262	Upper Silurian	Ludfordian	Keerhada, Mayila Mts., Xinjiang, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Praespongocoelia* (301)**							
Praespongocoelia fusiforma	IS (O&F)	–	–	Noble 1994: 38	Upper Silurian	Gorstian	Caballos Novaculite Formation, East Bourland Mts., Marathon Basin, W Texas, USA
Praespongocoelia robusta	IS (O&F)	–	–	Umeda 1997: 423	Lower Devonian	Lochkovian	Jyoru Formation, Kurosegawa Belt, Mt. Konomori, Kochi City, Shikoku, Japan
***Primaritripus* (323)**							
Primaritripus buribayensis	S?	n.d.	–	Afanasieva & Amon 2008: 465	Lower Devonian	Emsian	Kamennaya Gora, Tanalyk River, Southern Ural, Russia
Primaritripus chuvashovi	S?	n.d.	–	Afanasieva & Amon 2008: 465	Upper Devonian	lower Frasnian	Argagan Mountains, Sultantimirovo, southern Urals, Russia
Primaritripus kariukmasensis	S?	n.d.	–	Afanasieva & Amon 2009a: 45	Upper Devonian	lower Frasnian	Argagan Mountains, Sultantimirovo, southern Urals, Russia
Priscilatentidiota							
Priscilatentidiota kozurii	–	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Prismatium							
Prismatium paradictyum	–	n.d.	–	Rüst 1892: 178	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
***Procyrtis* (157)**							
Procyrtis qinglai	E	–	–	Li 1995: 337	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Procyrtis rustii	E	–	T	Li 1995: 336	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
***Proholoeciscus* (24)**							
Proholoeciscus deweveri	Al	–	–	Li 1995: 339	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Proholoeciscus foremanii	Al	–	Ts	Li 1995: 339	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Proholoeciscus holdsworthi	Al	–	–	Li 1995: 339	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
***Protoalbaillella* (6)**							
Protoalbaillella anaiwanensis	Al	–	–	Aitchison 1993a: 361	Lower Carboniferous	Tournaisian	Gundahl Complex, Anaiwan terrane, Jackadgery, NSW, Australia
Protoalbaillella deflandrei	Al	–	T	Cheng 1986: 68	Lower Carboniferous	Bashkirian	Jones Valley Shale, Le Flore County, eastern Oklahoma, USA
Protoalbaillella formosa	Al	–	–	Cheng 1986: 68	Upper Devonian	Famennian	Woodford Formation and Johns Valley Shale, Ouachita Mtns, Oklahoma, USA
Protoalbaillella oilensis	Al	–	–	Schwartzapfel & Holdsworth 1996: 91	Lower Carboniferous	Serpukhovian	Goddard Formation, Oil Creek section, Johnston County, Oklahoma, USA
Protoalbaillella pinetopensis	Al	–	–	Cheng 1986: 69	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Protoalbaillella talihinaensis	Al	–	–	Cheng 1986: 70	Lower Carboniferous	Bashkirian	Jones Valley Shale, Le Flore County, eastern Oklahoma, USA
Protoalbaillella triangulata	Al	–	–	Won 1990: 138	Lower Carboniferous	Visean	Riescheid Section, Wuppertal-Barmen, Germany
Protoalbaillella unispinosa	Al	–	–	Won 1998: 226	Lower Carboniferous	Tournaisian	Oese, Rheinische Schiefergebirge, Germany
Protoalbaillella? aprathensis	Al	–	–	Won & Seo 2010: 243	Lower Carboniferous	Visean	Bergisches Land, N Westfalia, Germany
***Protobiramus* (302)**							
Protobiramus biaxialus	S	–	T	Won *in* Won & Below 1999: 360	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Protoceratoikiscum* (25)**							
Protoceratoikiscum arachnoides	Al	n.c.	–	Goto, Umeda & Ishiga 1992: 165	Upper Ordovician	Katian	Malongulli Formation, Lachlan Fold Belt, 30 km NW of Taralga, NSW, Australia
Protoceratoikiscum chinocrystallum	Al	–	T	Goto, Umeda & Ishiga 1992: 166	Upper Ordovician	Katian	Malongulli Formation, Lachlan Fold Belt, 30 km NW of Taralga, NSW, Australia
Protoceratoikiscum clarksoni	Al	–	–	Danelian & Floyd 2001: 495	Lower Ordovician	Floian	Lower Crawford track, Southern Uplands, Scotland, UK
Protoceratoikiscum crossingi	Al	–	–	Noble & Webby 2009: 553	Upper Ordovician	Katian	Malongulli Formation, Cliefden Caves area, NSW, Australia
Protoceratoikiscum similistellatum	Al	–	–	Li 1995: 337	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
***Protoentactinia* (63)**							
Protoentactinia bifurcata	Ar	–	–	Maletz & Bruton 2007: 262	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
Protoentactinia deformis	Ar	–	–	Won, Iams & Reed 2005: 455	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Protoentactinia gracilispinosa	Ar	–	Ts	Kozur, Mostler & Repetski 1996: 253	Lower Ordovician	Tremadocian	Windfall Formation, Antelope Range, Eureka County, Nevada, USA
Protoentactinia kozuriana	Ar	–	–	Won, Iams & Reed 2005: 455	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Protoentactinia latospinosa	Ar	–	–	Kozur, Mostler & Repetski 1996: 254	Lower Ordovician	Tremadocian	Windfall Formation, Antelope Range, Eureka County, Nevada, USA
Protoentactinia minuta	Ar	–	–	Kozur, Mostler & Repetski 1996: 254	Lower Ordovician	Tremadocian	Windfall Formation, Antelope Range, Eureka County, Nevada, USA
Protoentactinia primigena	Ar	–	–	Won, Iams & Reed 2005: 456	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Protoentactinia transformis	Ar	–	–	Won, Iams & Reed 2005: 457	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
***Protoholoeciscus* (26)**							
Protoholoeciscus hindea	Al	–	T	Aitchison 1993a: 362	Upper Devonian	Famennian	Djungati terrane, Upper Barnard Valley, New England orogen, NSW, Australia
Protoholoeciscus ochiensis	Al	–	–	Umeda 1998a: 104	Middle Devonian	Eifelian	Nakahata Formation, Section C, Ochi Town, Shikoku, Japan
Protoholoeciscus spinosus	Al	–	–	Umeda 1998a: 104	Middle Devonian	Eifelian	Nakahata Formation, Section C, Ochi Town, Shikoku, Japan
***Protoproventocitum* (282)**							
Protoproventocitum aitchisoni	IS	–	T	Won, Iams & Reed 2007: 536	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Protoproventocitum nazarovii	IS	–	–	Won, Iams & Reed 2007: 537	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Protoproventocitum? floianum	IS	–	–	Won & Iams 2015a: 22	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
***Protosegmentum* (324)**							
Protosegmentum xinjiangensis	–	n.d.	Td	Wang *in* Wang *et al.* 2008: 397	Middle Ordovician	Dapingian	Heituao Formation, Tarim Basin, Kuruktag region, Xinjiang, China
***Protospongentactinia* (64)**							
Protospongentactinia spongiosa	Ar	–	T	Won, Iams & Reed 2007: 532	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
***Proventocitum* (283)**							
Proventocitum cylindricum	IS	–	–	Won & Iams 2011: 173	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Proventocitum holdsworthi	IS	–	–	Aitchison 1998: 79	Lower Ordovician	Arenig	Ballantrae Complex, Bennane Lea, SW Scotland, UK
Proventocitum piriforme	IS	–	–	Won & Iams 2011: 173	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Provisocyntra* (116)**							
Provisocyntra amplissima	E	–	–	Nazarov & Ormiston 1987: 72	Upper Carboniferous	Moscovian	Nyatvinsk Formation, Popovka River, Prikolyma Region, Magadan Region, NE Russia
Provisocyntra cassicula	E	–	T	Nazarov & Ormiston 1987: 72	Lower Carboniferous	Tournaisian	Lodgepole Formation, Amoco Daniel Anderson No. 1 well, Rolette County, North Dakota, USA
Provisocyntra conferta	E	–	–	Won 1997b: 383	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Provisocyntra densa	E	–	–	Feng *in* Feng *et al.* 2007: 34	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Provisocyntra ormistoni	E	–	–	Feng *in* Feng *et al.* 2007: 34	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Provisocyntra pskemensis	E	–	–	Nazarov & Ormiston 1987: 73	Lower Carboniferous	Serpukhovian	Pskemskiy Khrebet, Pskem Range, Tashkent, Uzbekistan
Provisocyntra tenuitomenta	E	–	–	Nazarov & Ormiston 1987: 72	Upper Carboniferous	Moscovian	Nyatvinsk Formation, Popovka River, Prikolyma Region, Magadan Region, NE Russia
Prunulum							
Prunulum armeniacum	–	n.d.	–	Rüst 1892: 157	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Prunulum murrayi	–	n.d.	–	Rüst 1892: 157	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
***Pseudoalbaillella* (39)**							
Pseudoalbaillella (Pseudoalbaillella) eurasiatica	Al	–	–	Kozur & Mostler 1989: 177	Lower Permian	Kungurian	Ashimi-dani section, Ukyo-ku, Kyoto Prefecture, Japan
Pseudoalbaillella aidensis	Al	–	–	Nishimura & Ishiga 1987: 174	Middle Permian	Wordian	Maizuru Belt, Mimasaka, Chugoku District, Japan
Pseudoalbaillella annulata	Al	–	–	Ishiga *in* Ishiga *et al.* 1984: 48	Lower Permian	Asselian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Ohmori, near Shuzan, Kinki Prefecture, Japan
Pseudoalbaillella apachensis	Al	–	–	Nestell & Nestell 2010: 18	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Pseudoalbaillella banchengensis	Al	–	–	Xian & Zhang 1998: 194	Lower Permian	Kungurian	Bancheng Formation, SE Guangxi, China
Pseudoalbaillella bella	Al	–	–	Sheng & Wang 1985: 174, 178-179	Lower Permian	Kungurian	Gufeng Formation, N Mt. Konghshan, Hushan, Nanjing, China
Pseudoalbaillella boonevillensis	Al	–	–	Nestell, Pope & Nestell 2012: 232	Upper Carboniferous	Moscovian	Mouse Creek Formation, Excello Shale Member, south-central Iowa, USA
Pseudoalbaillella bulbosa	Al	–	–	Ishiga 1982: 335	Upper Carboniferous	Gzhelian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Loc. 1, Kurookagawa River, Sasayama City, Japan
Pseudoalbaillella chilensis	Al	–	–	Ling & Forsythe 1987: 257	Upper Carboniferous	Gzhelian	Denaro Complex, Magallanes y Antartica Chilena, Chile
Pseudoalbaillella cona	Al	–	–	Cornell & Simpson 1985: 276	Middle Permian	Roadian	Bone Spring Formation, Guadalupe Mts., Culbertson County, W Texas, USA
Pseudoalbaillella convexa	Al	–	–	Rudenko *in* Rudenko & Panasenko 1990b: 184	Upper Permian	Wuchiapingian	Pantov Member, Tauka Terrane, Tumanovk, Pantov area, Primorskiy Kray, Russia
Pseudoalbaillella corniculata	Al	–	–	Rudenko *in* Rudenko & Panasenko 1990b: 185	Upper Permian	Wuchiapingian	Pantov Member, Tauka Terrane, Tumanovk, Pantov area, Primorskiy Kray, Russia
Pseudoalbaillella decurvata	Al	–	–	Nestell, Pope & Nestell 2012: 234	Upper Carboniferous	Moscovian	Mouse Creek Formation, Excello Shale Member, south-central Iowa, USA
Pseudoalbaillella delawarensis	Al	–	–	Maldonado & Noble 2010: 82	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Pseudoalbaillella desmoinesiensis	Al	–	–	Nestell, Pope & Nestell 2012: 234	Upper Carboniferous	Moscovian	Mouse Creek Formation, Excello Shale Member, south-central Iowa, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Pseudoalbaillella* (39) continuation**							
Pseudoalbaillella elegans	Al	–	–	Ishiga & Imoto 1980: 337	Lower Permian	Kungurian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Sasayama area, Chugoku District, Japan
Pseudoalbaillella elongata	Al	–	Ts	Ishiga & Imoto 1980: 339	Lower Permian	Kungurian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Sasayama area, Chugoku District, Japan
Pseudoalbaillella excella	Al	–	–	Nestell, Pope & Nestell 2012: 233	Upper Carboniferous	Moscovian	Mouse Creek Formation, Excello Shale Member, south-central Iowa, USA
Pseudoalbaillella globosa	Al	–	–	Ishiga & Imoto *in* Ishiga *et al.* 1982b: 275	Lower Permian	Kungurian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Ashimi-dani section, Ukyo-ku, Kyoto, Japan
Pseudoalbaillella internata	Al	–	–	Wang *in* Wang *et al.* 2012: 108	Middle Permian	Roadian	Bancheng Formation, SE Guangxi, China
Pseudoalbaillella ishigai	Al	–	–	Wang *in* Wang *et al.* 1994: 181	Lower Permian	Kungurian	Dachongling section, Qinzhou City, Guangxi, S China
Pseudoalbaillella lanceolata	Al	–	Ts	Ishiga & Imoto *in* Ishiga *et al.* 1982b: 275	Lower Permian	Kungurian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Ashimi-dani section, Ukyo-ku, Kyoto, Japan
Pseudoalbaillella lomentaria	Al	–	–	Ishiga & Imoto 1980: 338	Lower Permian	Kungurian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Sasayama area, Chugoku District, Japan
Pseudoalbaillella longtanensis	Al	–	–	Sheng & Wang 1985: 174, 179	Lower Permian	Kungurian	Gufeng Formation, N Mt. Konghshan, Hushan, Nanjing, China
Pseudoalbaillella longuscornis	Al	–	–	Ishiga & Imoto 1980: 337	Lower Permian	Kungurian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Sasayama area, Chugoku District, Japan
Pseudoalbaillella nanjingensis	Al	–	–	Sheng & Wang 1985: 174-175, 179	Lower Permian	Kungurian	Gufeng Formation, N Mt. Konghshan, Hushan, Nanjing, China
Pseudoalbaillella nodosa	Al	–	–	Ishiga 1982: 334	Upper Carboniferous	Gzhelian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Loc. 1, Kurookagawa River, Sasayama City, Japan
Pseudoalbaillella ornata	Al	–	–	Ishiga & Imoto 1980: 339	Lower Permian	Kungurian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Sasayama area, Chugoku District, Japan
Pseudoalbaillella papaiensis	Al	n.n.	–	Feng 1992: 55	Upper Permian	Changhsingian	Papai Formation of Changning-Menglian Belt, Papai Village, Cangyuan County, Yunnan, China
Pseudoalbaillella rhombothoracata	Al	–	–	Ishiga & Imoto 1980: 339	Lower Permian	Kungurian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Sasayama area, Chugoku District, Japan
Pseudoalbaillella scalprata	Al	–	T	Holdsworth & Jones 1980: 285	Lower Permian	Artinskian	Havallah Formation, USGS MR 0203, Nevada, USA
Pseudoalbaillella scalprata postscalprata	Al	–	–	Ishiga 1983: 3	Lower Permian	Kungurian	Fujioka-oku, in the Fujiokagawa Valley, Sasayama City, Hyogo Prefecture, SW Japan
Pseudoalbaillella scalprata praescalprata	Al	–	–	Catalano, Di Stefano & Kozur 1989: 92	Lower Permian	Kungurian	Fujioka-oku, in the Fujiokagawa Valley, Sasayama City, Hyogo Prefecture, SW Japan
Pseudoalbaillella scalprata scalprata	Al	–	–	Ishiga 1983: 2	Lower Permian	Kungurian	Fujioka-oku, in the Fujiokagawa Valley, Sasayama City, Hyogo Prefecture, SW Japan
Pseudoalbaillella simplex	Al	–	–	Ishiga & Imoto 1980: 337	Lower Permian	Kungurian	Funafuseyama Unit, Tamba-Mino-Ashio Belt, Sasayama area, Chugoku District, Japan
Pseudoalbaillella triangularis	Al	–	–	Wang *in* Wang *et al.* 2012: 108	Lower Permian	Artinskian	Bancheng Formation, SE Guangxi, China
Pseudoalbaillella u-forma	Al	n.c.	Ts	Holdsworth & Jones 1980: 285	Lower Permian	Artinskian	Big Delta quadrangle, USGS MR loc. 0349, east-central Alaska, USA
Pseudoalbaillella yanaharensis	Al	–	–	Nishimura & Ishiga 1987: 173	Middle Permian	Wordian	Maizuru Belt, Mimasaka, Chugoku District, Japan
***Pseudolithelius* (202)**							
Pseudolithelius permicus	L	–	T	Kozur & Mostler 1989: 186	Lower Permian	Artinskian	Koshelev Formation, Alogazovo Village, Movsovic Region, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Pseudorotasphaera* (73)**							
Pseudorotasphaera communa	Ar	–	–	Noble 1994: 26	Middle Silurian	Homerian	Caballos Novaculite Formation, East Bourland Mts., Marathon Basin, W Texas, USA
Pseudorotasphaera hispida	Ar	–	T	Noble 1994: 25	Upper Silurian	Gorstian	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA
Pseudorotasphaera lanceolata	Ar	–	–	Noble 1994: 26	Upper Silurian	Gorstian	Caballos Novaculite Formation, Beckwith Hills, Marathon Basin, W Texas, USA
Pseudorotasphaera? robustispina	Ar	–	–	Noble 1994: 27	Upper Silurian	Gorstian	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA
Pseudorotasphaera? rotunda	Ar	–	–	Noble 1994: 27	Upper Silurian	Gorstian	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA
***Pseudospongoprunum* (273)**							
Pseudospongoprunum parvispina	S	–	–	Tetard, Noble & Danelian *in* Tetard et al 2015: 873	Upper Silurian	Gorstian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Pseudospongoprunum prototypum	S	–	–	Umeda 1998b: 207	Upper Silurian	Pridoli	Kurosegawa Belt, Shikoku, Japan
Pseudospongoprunum sagittatum	S	–	–	Wakamatsu, Sugiyama & Furutani 1990: 173	Lower Devonian	Lochkovian	G4 formation of Gion-yama Group, Mt. Gionyama area, Kyushu, Japan
Pseudospongoprunum tazukawaensis	S	–	T	Wakamatsu, Sugiyama & Furutani 1990: 173	Upper Silurian	Gorstian	SE Suberidani, along Tazukawa River, Katsuura Town, Shikoku, Japan
Pseudospongoprunum? chiangdaoensis	S	–	–	Sashida *in* Sashida *et al.* 2000c: 805	Upper Permian	Changhsingian	Ratuburi Group, Sukhothai Fold Belt, section I, Khao Wang Chik, Rayong, Thailand
Pseudospongoprunum? fontainei	S	–	–	Sashida *in* Sashida *et al.* 2000b: 255	Upper Permian	Changhsingian	Ratuburi Group, Sukhothai Fold Belt, section I, Khao Wang Chik, Rayong, Thailand
Pseudospongoprunum? tauversi	S	–	–	Noble 1994: 28	Upper Silurian	Gorstian	Caballos Novaculite Formation, Monument Ck., Bourland Mts., Marathon Basin, W Texas, USA
***Pseudotormentus* (176)**							
Pseudotormentus delawarensis	L	–	–	Schwartzapfel & Holdsworth 1996: 222	Lower Carboniferous	Visean	Caney Shale, Arbuckle Mountains, Sand Branch Section, Johnston County, Oklahoma, USA
Pseudotormentus kamigoriensis	L	–	T	De Wever & Caridroit 1984: 101	Middle Permian	Capitanian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
Pseudotormentus monoporus	L	–	–	Wang *in* Wang *et al.* 2012: 110	Upper Permian	upper Changhsingian	Bancheng Formation, SE Guangxi, China
Pterocanium tenuecostatum	–	n.d.	–	Rüst 1892: 183	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Pygacapsa							
Pygacapsa bilaminata	n.r.	–	Tnr	Wang 1989: 145	Lower Cambrian	–	Niutitang Formation, Sandu district, Guizhou Province, China
***Pylentonema* (160)**							
Pylentonema antiqua	E	–	–	Deflandre 1963: 3982	Lower Carboniferous	Visean	Cabrières, Hérault, France
Pylentonema aperta	E	–	Ts	Nazarov *in* Nazarov *et al.* 1975: 102	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Pylentonema aperta	–	inv.	–	Nazarov *in* Nazarov *et al.* 1977: 918	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Pylentonema banchengensis	E	–	–	Wang & Kuang 1993: 279	Lower Carboniferous	Tournaisian	Shijia Formation, Shijia Resevoir, Qinzhou area, Guangxi Zhuang Region, SW China
Pylentonema eucosmeta	E	–	–	Braun 1989: 91	Lower Carboniferous	upper Tournaisian	Pebbles of siliceous shale from the lower Main-valley near Frankfurt a. M., Germany
Pylentonema hindei	E	–	–	Cheng 1986: 117	Lower Carboniferous	Bashkirian	Jones Valley Shale, Le Flore County, eastern Oklahoma, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Pylentonema* (160) continuation**							
Pylentonema insueta	E	–	Ts	Nazarov 1975: 97	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Pylentonema insueta	E	–	–	Nazarov *in* Nazarov *et al.* 1977: 918	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Pylentonema mira	E	–	–	Cheng 1986: 118	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Pylentonema racheboeufi	E	–	–	Gourmelon 1986: 189	Lower Carboniferous	Tournaisian	Hautes-Pyrénées, France
Pylentonema rimata	E	–	–	Nazarov *in* Nazarov & Popov 1980: 62	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Pylentonema robusta	E	–	–	Schwartzapfel & Holdsworth 1996: 154	Upper Devonian	upper Famennian	Woodford Formation, Criner Hills 2A section, Carter County, Oklahoma, USA
Pylentonema transitorum	E	–	–	Liu & Hao 2006: 649	Upper Devonian	Famennian	Tielimaitidaban section, SW Tianshan, Xinjiang, China
Pylentonema triangulata	E	–	–	Cheng 1986: 119	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Pylentonema typica	E	–	–	Cheng 1986: 119	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Pylentonema? *parviaperta*	E	–	–	Park & Won 2012: 64	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Pylentonema? *serrensis*	E	–	–	Gourmelon 1987: 107	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
***Quadrapesus* (162)**							
Quadrapesus araneae	E	–	–	Schwartzapfel & Holdsworth 1996: 162	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Quadrapesus bakeri	E	–	–	Schwartzapfel & Holdsworth 1996: 156	Upper Devonian	upper Famennian	Woodford Formation, Criner Hills 2A section, Carter County, Oklahoma, USA
Quadrapesus dumitricai	E	–	T	Cheng 1986: 121	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Quadrapesus transitivus	E	–	–	Liu & Hao 2006: 649	Upper Devonian	Famennian	Tielimaitidaban section, SW Tianshan, Xinjiang, China
Quadrapesus unicus	E	–	–	Cheng 1986: 122	Upper Devonian	Famennian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Quadrapesus? *conili*	E	–	–	Schwartzapfel & Holdsworth 1996: 158	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Quadrapesus? *jimisonae*	E	–	–	Schwartzapfel & Holdsworth 1996: 159	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Quadrapesus? *sixi*	E	–	–	Schwartzapfel & Holdsworth 1996: 157	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
***Quadratapora* (344)**							
Quadratapora zhenbaensis	n.r.	i.s.	Tnr	Hao & Shu 1987: 309	Lower Cambrian	Terreneuvian	Shuijingtuo Formation, Shaanxi Province, Zhenba County, China
***Quadricaulis* (196)**							
Quadricaulis femoris	L	–	Ts	Caridroit & De Wever 1986: 79	Upper Permian	Wuchiapingian	Oi Formation, Ultra-Tamba Belt, Yanogawa River, Yamasakicho-Kusune, Shisou City, Japan
***Quadrilobata* (205)**							
Quadrilobata ephippiomorpha	L	–	T	Wang 1995: 144	Middle Permian	Capitanian	Gufeng Formation, Jiangsu, China
Quadrilobata? *blomei*	L	–	–	Nestell & Nestell 2010: 50	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
***Quadriremis* (197)**							
Quadriremis flata	L	–	–	Wang 1993a: 451	Lower Permian	Kungurian	Gufeng Formation, Qiaotou Village, Chaou City, Anhui, China
Quadriremis gliptoacus	L	–	T	Nazarov & Ormiston 1985: 36	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Quadriremis* (197) continuation**							
Quadriremis minima	L	–	–	Nazarov & Ormiston 1985: 36	Middle Permian	Roadian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Quadriremis nevadensis	L	–	–	Nazarov & Ormiston 1989: 11	Middle Permian	Capitanian	Willow Canyon Formation, Toquima Range, Mill Canyon, Nevada, USA
Quadriremis nevadensis	L	–	–	Nazarov & Ormiston 1993: 45	Middle Permian	Capitanian	Willow Canyon Formation, Toquima Range, Mill Canyon, Nevada, USA
***Quasibeothuka* (274)**							
Quasibeothuka bifurcata	S	–	–	Wang *in* Wang *et al.* 2008: 400	Middle Ordovician	Dapingian	Heituao Formation, Tarim Basin, Kuruktag region, Xinjiang, China
Quasibeothuka ellipsoidala	S	–	–	Wang *in* Wang *et al.* 2008: 400	Middle Ordovician	Dapingian	Heituao Formation, Tarim Basin, Kuruktag region, Xinjiang, China
Quasibeothuka fusiforma	S	–	Td	Wang *in* Wang *et al.* 2008: 399	Middle Ordovician	Dapingian	Heituao Formation, Tarim Basin, Kuruktag region, Xinjiang, China
Quasibeothuka longifusiforma	S	–	–	Wang *in* Wang *et al.* 2008: 400	Middle Ordovician	Dapingian	Heituao Formation, Tarim Basin, Kuruktag region, Xinjiang, China
Quasibeothuka ovata	S	–	–	Wang *in* Wang *et al.* 2008: 399	Middle Ordovician	Dapingian	Heituao Formation, Tarim Basin, Kuruktag region, Xinjiang, China
***Quinqueremis* (198)**							
Quinqueremis arundinea	L	–	–	Nazarov & Ormiston 1983b: 375	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Quinqueremis arundinea	L	–	T	Nazarov & Ormiston 1985: 37	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Quinqueremis clathrolobulatus	L	–	–	Amon & Braun 1994: 6	Lower Permian	Artinskian	Burtsevesky horizon, Dalny Tulkas Rill, Bashkortostan Region, S Urals, Russia
Quinqueremis robusta	L	–	–	Nazarov & Ormiston 1985: 37	Middle Permian	Capitanian	U.S. Highway 180, Culbertson County, Texas, USA
Quinqueremis yunnanensis	–	n.n.	–	Feng 1992: 55	Upper Permian	Changhsingian	Papai Formation of Changning-Menglian Belt, Papai Village, Cangyuan County, Yunnan, China
***Radiobisphaera* (117)**							
Radiobisphaera acuta	E	–	–	Won 1997a: 351	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Radiobisphaera flamans	E	–	–	Won 1997a: 351	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Radiobisphaera magnifenestra	E	–	–	Won 1997a: 352	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Radiobisphaera menneri	E	–	–	Afanasieva 2000a: 60	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Radiobisphaera multa	E	–	–	Won 1997a: 353	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Radiobisphaera multiaculeata	E	–	–	Won 1997a: 353	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Radiobisphaera multiaculeata multiaculeata	E	–	–	Won 1997a: 353	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Radiobisphaera nazaroviana	E	–	–	Won 1997a: 356	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Radiobisphaera rozanovi	E	–	–	Afanasieva & Amon 2009b: 495	Upper Devonian	middle Frasnian	Kamenevskaya Formation, Goryunovo, Zolotukha River, Goryunovo, Rudnyi Altai, Russia
Radiobisphaera variantia	E	–	T	Won 1997a: 356	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Radiobisphaera variantia inaequalis	E	–	–	Won 1997a: 358	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Radiobisphaera variantia variantia	E	–	–	Won 1997a: 356	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Ramuspiculum* (67)**							
Ramuspiculum curvatum	Ar	–	–	Won & Iams 2002: 29	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Ramuspiculum multiramosum	Ar	–	T	Won & Iams 2002: 29	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Ramuspiculum trifurcatum	Ar	–	–	Won & Iams 2002: 29	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
***Raphidociclicus* (27)**							
Raphidociclicus gemellus	Al	–	–	Nazarov & Rudenko 1981: 136	Lower Permian	Artinskian	Aktastyi River, Orenburgskaya region, Southern Urals, Russia
Raphidociclicus gemellus americanus	Al	–	–	Nazarov & Ormiston 1985: 52	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Raphidociclicus hiulcus	Al	–	T	Nazarov & Rudenko 1981: 135	Lower Permian	Sakmarian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Raphidociclicus scutum	Al	–	–	Maldonado & Noble 2010: 80	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
***Rectotormentum* (213)**							
Rectotormentum fengi	L	–	–	Noble & Jin 2010: 143	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts., Culberson County, W Texas, USA
Rectotormentum fornicatum	L	–	T	Nazarov & Ormiston 1985: 41	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Rectotormentum wardlawi	L	–	–	Nestell & Nestell 2010: 42	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
***Retentactinia* (118)**							
Retentactinia aspera	E	–	–	Won 1997b: 384	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retentactinia aspinosa	E	–	–	Won 1997b: 384	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retentactinia delicata	E	–	–	Won 1997b: 384	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retentactinia dellensus	E	–	–	Park & Won 2012: 58	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Retentactinia impedita	E	–	T, Th	Won 1997b: 385	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retentactinia interreticulata	E	–	–	Won 1997b: 385	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retentactinia kelleri	E	–	–	Afanasieva 2000a: 76	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Retentactinia levis	E	–	–	Won 1997b: 386	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retentactinia longa	E	–	–	Won 1997b: 386	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retentactinia longa densa	E	–	–	Won 1997b: 388	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retentactinia longa longa	E	–	–	Won 1997b: 386	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retentactinia longa pilosa	E	–	–	Won 1997b: 388	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retentactinia repleta	E	–	T	Won 1997b: 390	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retentactinia spongiosa	E	–	–	Seo & Won 2009: 72	Lower Carboniferous	Visean	Bergisches Land, N Westfalia, Germany
***Retientactinosphaera* (303)**							
Retientactinosphaera clavata	IS (O&F)	–	–	Afanasieva 2011: 128	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Retientactinosphaera magnifica	IS (O&F)	–	T	Afanasieva 2011: 127	Upper Devonian	lower Famennian	Zadonsk Formation, W Lekkeyaginsk-65, Saremboi-Lekkeyaga, Timan-Pechora Basin, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Retisphaera* (119)**							
Retisphaera distratalis	E	–	–	Won 1997b: 396	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retisphaera ovata	E	–	–	Won 1997b: 398	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Retisphaera rota	E	–	–	Won 1997b: 398	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Rhizoplegma							
Rhizoplegma betulinum	–	n.d.	–	Rüst 1892: 150	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Rhodosphaera							
Rhodosphaera crucifera	E	n.d.	–	Rüst 1892: 137	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Rhodosphaera devoniensis	E	n.d.	–	Rüst 1892: 137	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Rhodosphaera idonea	E	n.d.	–	Rüst 1892: 137	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Rhodosphaera pulchra	E	n.d.	–	Rüst 1892: 138	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Rhodosphaera ruesti	–	n.d.	–	Hinde 1899a: 44	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Rhopalastrum							
Rhopalastrum carbonicum	L	–	–	Rüst 1892: 170	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Rhopalastrum clavatum	–	n.d.	–	Hinde & Fox 1895: 641	Carboniferous	Serpukhovian-Bashkirian	Codden Hill bed, Devon, England, UK
Rhopalastrum giganteum	L	–	–	Rüst 1892: 171	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Rhopalastrum ingens	–	n.d.	–	Hinde & Fox 1895: 641	Carboniferous	Serpukhovian-Bashkirian	Codden Hill bed, Devon, England, UK
Rhopalastrum isselii	L	–	–	Rüst 1892: 171	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Rhopalastrum siculum	L	–	–	Rüst 1892: 171	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Rhopalodictyum							
Rhopalodictyum astrictum	–	n.d.	–	Rüst 1892: 174	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
***Robotium* (228)**							
Robotium biauriculum	N?	–	–	Cheng 1986: 137	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Robotium firmum	N?	–	–	Cheng 1986: 137	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Robotium gordoni	N?	–	–	Cheng 1986: 138	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Robotium ruesti	N?	n.c.	–	Cheng 1986: 139	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Robotium validum	N?	–	Ts	Cheng 1986: 139	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
Robotium venustum	N?	–	–	Cheng 1986: 140	Lower Carboniferous	Tournaisian	Woodford Formation, TI Valley section, Pittsburg County, Oklahoma, USA
***Rotasphaera* (74)**							
Rotasphaera beckwithensis	Ar	–	–	Noble 1994: 20	Upper Silurian	Gorstian	Caballos Novaculite Formation, Beckwith Hills, Marathon Basin, W Texas, USA
Rotasphaera delicata	Ar	–	–	Noble 1994: 20	Upper Silurian	Gorstian	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Rotasphaera* (74) continuation**							
Rotasphaera marathonensis	Ar	–	Ts	Noble 1994: 21	Middle Silurian	Homerian	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA
Rotasphaera nuda	Ar	–	–	Noble 1994: 21	Upper Silurian	Gorstian	Caballos Novaculite Formation, East Bourland Mts., Marathon Basin, W Texas, USA
Rotasphaera quadrata	Ar	–	–	Noble 1994: 21	Middle Silurian	Homerian	Caballos Novaculite Formation, East Bourland Mts., Marathon Basin, W Texas, USA
Rotasphaera robertsorum	Ar	–	–	Noble 1994: 22	Upper Silurian	Gorstian	Caballos Novaculite Formation, Beckwith Hills, Marathon Basin, W Texas, USA
Rotasphaera severa	Ar	–	–	MacDonald 1998: 599	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
***Russirad* (304)**							
Russirad kazintsovae	IS (O&F)	–	T	Afanasieva 2000a: 35	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
***Ruzhencevispongus* (214)**							
Ruzhencevispongus aktastiensis	L	–	–	Nazarov & Ormiston 1993: 44	Lower Permian	Artinskian	Aktastyi River, Orenburgskaya region, Southern Urals, Russia
Ruzhencevispongus aktastiensis	L	n.n.	–	Nazarov 1988: 75	Lower Permian	Artinskian	Aktastyi River, Orenburgskaya region, Southern Urals, Russia
Ruzhencevispongus apertus	L	–	–	Amon, Braun & Chuvashov 1990: 126	Lower Permian	Artinskian	Shelyvaginsk Formation, around Sim Town, Chalyabinskaya region, Urals, Russia
Ruzhencevispongus cataphractus	L	n.n.	Ts	Nazarov & Ormiston 1984: pl. 5, fig. 11	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Ruzhencevispongus cataphractus	L	–	–	Nazarov & Ormiston 1985: 29	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Ruzhencevispongus girtyi	L	–	–	Nazarov & Ormiston 1985: 32	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Ruzhencevispongus laqueus	L	–	–	Nazarov & Ormiston 1993: 45	Lower Permian	Artinskian	Maloik Formation, Don Village, Ural River, Orenburgskaya Region, S Urals, Russia
Ruzhencevispongus partilaminatus	L	–	–	Nazarov & Ormiston 1989: 14	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Ruzhencevispongus retiporosus	L	–	–	Nazarov & Ormiston 1989: 13	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Ruzhencevispongus rotundus	L	–	–	Feng *in* Feng *et al.* 2006b: 831	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Ruzhencevispongus uralicus	L	–	T	Kozur 1980: 237	Lower Permian	Sakmarian	Sarabil Formation, Verchneozernaja Station, Orenburgskaya Region, Urals, Russia
Ruzhencevispongus uralicus subtriangulus	L	–	–	Wang 1993b: 9	Middle Permian	Capitanian	Gufeng Formation, Jiangsu, China
Ruzhencevispongus uralicus triradiatus	L	–	–	Wang 1993b: 9	Middle Permian	Capitanian	Gufeng Formation, Jiangsu, China
Ruzhencevispongus uralicus uralicus	L	–	–	Wang 1993b: 9	Middle Permian	Capitanian	Gufeng Formation, Jiangsu, China
Ruzhencevispongus? *cacumenireticulatus*	L	–	–	Nazarov & Ormiston 1989: 14	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Ruzhencevispongus? *emarginatus*	L	–	–	Nazarov & Ormiston 1989: 15	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Ruzhencevispongus? *plumatus*	L	–	–	Nazarov & Ormiston 1985: 30	Lower Permian	Sakmarian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia
Ruzhencevispongus? *promiscuus*	L	–	–	Nazarov & Ormiston 1989: 15	Lower Permian	Artinskian	Kandurov Formation, Donskoye, Ural River, Orenburgskaya Region, S Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Sanctipaulelum* (288)**							
Sanctipaulelum biglobosum	IS	–	–	Won & Iams 2015a: 31	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Sanctipaulelum pingue	IS	–	–	Won & Iams 2015a: 31	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Sanctipaulelum superpingue	IS	–	–	Won & Iams 2015a: 32	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Sanctipaulelum? contractum	IS	–	–	Won & Iams 2015a: 32	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Sanctipaulelum? indivisum	IS	–	–	Won & Iams 2015a: 33	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Sanctipaulelum? inusitata	IS	–	–	Won & Iams 2015a: 33	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
***Scharfenbergia* (215)**							
Scharfenbergia concava	L	–	–	Park & Won 2012: 68	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Scharfenbergia plenospongiosa	L	–	–	Won 1983: 160	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Scharfenbergia tailleurense	L	–	–	Holdsworth & Murchey 1988: 787	Upper Carboniferous	Bashkirian	Kuna Formation, Nigu Bluff, Northern Brooks Range, Alaska, USA
***Secuicollacta* (75)**							
Secuicollacta alaskensis	Ar	–	–	Won, Blodgett & Nestor 2002: 949	Lower Silurian	Telychian	Road River Formation, subsidiary channel of Tatonduck River, east-central Alaska, USA
Secuicollacta amoenitas	Ar	–	–	Nazarov & Ormiston 1993: 42	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Secuicollacta amoenitas	Ar	n.n.	–	Nazarov 1988: 130	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Secuicollacta araneam	Ar	–	–	Aitchison 1993b: 121	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Secuicollacta baijingensis	Ar	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Secuicollacta cassa	Ar	–	T	Nazarov & Ormiston 1984: 75	Middle Silurian	Homerian	Makyutov Complex, Tarangul River, Kosistek Village, Southern Ural, Kazakhstan
Secuicollacta foliaspinella	Ar	–	–	Noble 1994: 23	Middle Silurian	Homerian	Caballos Novaculite Formation, East Bourland Mts., Marathon Basin, W Texas, USA
Secuicollacta glaebosa	Ar	–	–	MacDonald 1998: 592	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Secuicollacta gliris	Ar	–	–	MacDonald 1998: 589	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Secuicollacta herrimani	Ar	–	–	MacDonald 1998: 591	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Secuicollacta horrida	Ar	–	–	Furutani 1990: 50	Upper Silurian	Gorstian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan
Secuicollacta itoigawai	Ar	–	–	Furutani 1990: 50	Upper Silurian	Gorstian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan
Secuicollacta labyrinthica	Ar	–	–	Aitchison 1993b: 121	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Secuicollacta magnitesta	Ar	–	–	Won, Blodgett & Nestor 2002: 949	Lower Silurian	Telychian	Road River Formation, subsidiary channel of Tatonduck River, east-central Alaska, USA
Secuicollacta malevola	Ar	–	–	MacDonald 1998: 589	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Secuicollacta minuta	Ar	–	–	Goto, Umeda & Ishiga 1992: 161	Upper Ordovician	Katian	Malongulli Formation, Lachlan Fold Belt, 30 km NW of Taralga, NSW, Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Secuicollacta* (75) continuation**							
Secuicollacta nesymmetra	Ar	–	–	Li 1994: 264	Upper Silurian	Gorstian	Keerhada, Mayila Mts., Xinjiang, China
Secuicollacta nesymmetris	–	n.n.	–	Li 1991: 75	Upper Silurian	Gorstian	Mayila Complex, Keerhada, S Mayila Mt., Xinjiang, China
Secuicollacta ornata	Ar	–	–	Goto, Umeda & Ishiga 1992: 160	Upper Ordovician	Katian	Malongulli Formation, Lachlan Fold Belt, 30 km NW of Taralga, NSW, Australia
Secuicollacta parvitesta	Ar	–	–	Won, Blodgett & Nestor 2002: 949	Lower Silurian	Telychian	Road River Formation, subsidiary channel of Tatonduck River, east-central Alaska, USA
Secuicollacta resodiosae	Ar	–	–	MacDonald 1998: 592	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Secuicollacta sceptri	Ar	–	–	MacDonald 1998: 589	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Secuicollacta segari	Ar	–	–	MacDonald 1998: 591	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Secuicollacta silex	Ar	–	–	Goto, Umeda & Ishiga 1992: 161	Upper Ordovician	Katian	Malongulli Formation, Lachlan Fold Belt, 30 km NW of Taralga, NSW, Australia
Secuicollacta solara	Ar	–	–	Noble 1994: 24	Upper Silurian	Gorstian	Caballos Novaculite Formation, Beckwith Hills, Marathon Basin, W Texas, USA
Secuicollacta spissa	Ar	–	–	Nazarov & Ormiston 1993: 42	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Secuicollacta spissa	Ar	n.n.	–	Nazarov 1988: 122	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Secuicollacta stelligera	Ar	–	–	Renz 1990: 376	Upper Ordovician	Katian	Hanson Creek Formation, N Martin Ridge, Eureka County, Nevada, USA
Secuicollacta tatondukensis	Ar	–	–	Won, Blodgett & Nestor 2002: 951	Lower Silurian	Telychian	Road River Formation, subsidiary channel of Tatonduck River, east-central Alaska, USA
Secuicollacta teli	Ar	–	–	MacDonald 1998: 593	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Secuicollacta vallipuellae	Ar	–	–	MacDonald 1998: 592	Lower Silurian	Telychian	Cape Phillips Formation, Cornwallis Island, Canadian Arctic Archipelago
Secuicollacta vulgaris	Ar	–	–	Furutani 1990: 49	Upper Silurian	Gorstian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan
Secuicollacta xinjiangensis	–	n.n.	–	Li 1991: 75	Upper Silurian	Gorstian	Mayila Complex, Keerhada, S Mayila Mt., Xinjiang, China
Secuicollacta? *exquisita*	Ar	–	–	Wakamatsu, Sugiyama & Furutani 1990: 170	Upper Silurian	Ludfordian	G3 formation of Gion-yama Group, NE of Kyowa, Gokase Town, Kyushu, Japan
Secuicollacta? *platyspina*	Ar	–	–	Noble 1994: 24	Middle Silurian	Homerian	Caballos Novaculite Formation, East Bourland Mts., Marathon Basin, W Texas, USA
Secuidcollacta							
Secuidcollacta hindei	–	n.n.	–	Li 1995: 333	Middle Ordovician	Dapingian	Qingshuigou-Baijingsi Complex, Baijingsi, Quilian County, Qinghai, China
Sethocapsa							
Sethocapsa obstipa	–	n.d.	–	Rüst 1892: 182	Lower Devonian	–	Southern Urals, Russia
Sethocapsa pytine	–	n.d.	–	Ruedemann & Wilson 1936: 1579	Lower Ordovician	Floian	Normanskill chert, Fly Summit, Washington County, New York, USA
Sethocyrtis							
Sethocyrtis excisa	–	n.d.	–	Rüst 1892: 182	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Sethodiscus							
Sethodiscus chudleighensis	–	n.d.	–	Hinde & Fox 1895: 639	Carboniferous	Serpukhovian-Bashkirian	Codden Hill bed, Devon, England, UK

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
Sethostaurus							
Sethostaurus exsculptus	–	n.d.	–	Rüst 1892: 165	Lower Silurian	–	Cabrières, Hérault, France
***Shangella* (177)**							
Shangella capitanensis	L	–	–	Nestell & Nestell 2010: 38	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Shangella longa	L	–	T	Feng *in* Feng *et al.* 2006b: 829	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Shangella regularis	L	–	–	Feng *in* Feng *et al.* 2006b: 831	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Sinocyrtis							
Sinocyrtis bellulus	n.r.	–	Tnr	Wang 1989: 145	Lower Cambrian	–	Niutitang Formation, Sandu district, Guizhou Province, China
Sinocyrtis latobasalis	n.r.	–	–	Wang 1989: 146	Lower Cambrian	–	Niutitang Formation, Sandu district, Guizhou Province, China
***Sinosphaera* (120)**							
Sinosphaera spinosa	E	–	T	Feng *in* Feng *et al.* 2004a: 137	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Siphonosphaera streptosiphonia	–	n.d.	–	Ruedemann & Wilson 1936: 1568	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
***Somphoentactinia* (165)**							
Somphoentactinia cavata	E	–	–	Aitchison 1993b: 119	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Somphoentactinia gavrilovi	E	–	–	Afanasieva 2000a: 84	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Somphoentactinia multisphaerata	E	–	–	Afanasieva & Amon 2011: 1510	Upper Devonian	lower Famennian	Polar Urals, Palnik Yu River, Russia
Somphoentactinia saecularis	E	–	–	Afanasieva & Amon 2016: 216	Lower Permian	Artinskian	Kondurovka section, Sakmara River, Southern Urals, Russia
***Sphaerodiscus* (141)**							
Sphaerodiscus rota	E	–	Ts	Won 1983: 163	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
***Sphaeroentactinia* (46)**							
Sphaeroentactinia bispinosa	Ar	–	–	Maletz & Bruton 2007: 265	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
Sphaeroentactinia hexaspinosa	Ar	–	T	Maletz & Bruton 2007: 264	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
Sphaeroentactinia integrata	Ar	–	–	Maletz & Bruton 2007: 265	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
Sphaeroentactinia robusta	Ar	–	–	Won & Iams 2015a: 21	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Sphaeroentactinia saintpaulensis	Ar	–	–	Won & Iams 2015a: 21	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Sphaeroentactinia? multiradiata	Ar	–	–	Won & Iams 2013: 27	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Sphaeropyle							
Sphaeropyle dreyeri	–	n.d.	–	Rüst 1892: 141	Lower Devonian	–	Southern Urals, Russia
Sphaeropyle entostoma	–	n.d.	–	Rüst 1892: 141	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Sphaeropyle eurystoma	–	n.d.	–	Rüst 1892: 141	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Sphaeropyle laevis	–	n.d.	–	Rüst 1892: 140	Lower Devonian	–	Southern Urals, Russia
Sphaeropyle multangularis	–	n.d.	–	Rüst 1892: 141	Lower Devonian	–	Southern Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
Sphaerozoum							
Sphaerozoum minutum	–	n.d.	–	Ruedemann & Wilson 1936: 1566	Lower Ordovician	Floian	Normanskill chert, Fly Summit, Washington County, New York, USA
Sphaerozoum patulum	–	n.d.	–	Hinde 1890: 58	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Sphaerozoum priscum	–	n.d.	–	Hinde 1890: 57	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
***Spinodeflandrella* (8)**							
Spinodeflandrella acuminata	Al	–	–	Rudenko *in* Rudenko & Panasenko 1990b: 192	Upper Permian	Wuchiapingian	Pantov Member, Tauka Terrane, Tumanovk, Pantov area, Primorskiy Kray, Russia
Spinodeflandrella acutata	Al	–	–	Rudenko *in* Rudenko & Panasenko 1990b: 191	Upper Permian	Wuchiapingian	Pantov Member, Tauka Terrane, Tumanovk, Pantov area, Primorskiy Kray, Russia
Spinodeflandrella bicornuta	Al	–	–	Rudenko *in* Rudenko & Panasenko 1990b: 191	Upper Permian	Changhsingian	Samarkinsk Formation, Taukah Terrane, Breevka, Primorskiy Kray, Russia
Spinodeflandrella obtusa	Al	–	–	Rudenko *in* Rudenko & Panasenko 1990b: 192	Upper Permian	Wuchiapingian	Pantov Member, Tauka Terrane, Tumanovk, Pantov area, Primorskiy Kray, Russia
Spinodeflandrella tetraspinosa	Al	–	T	Kozur 1981: 267	Lower Permian	Sakmarian	Sarabil Formation, Kondurovska, Orenburgskaya Region, S Urals, Russia
Spinodeflandrella? siciliensis	Al	–	–	Catalano, Di Stefano & Kozur 1989: 89	Lower Permian	Kungurian	Sosio Valley Area, Torrente San Calogero, Western Sicily, Italy
Spirocapsa							
Spirocapsa singularis	–	n.d.	Td	Rüst 1892: 192	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Spironium							
Spironium haeckelii	–	n.d.	–	Rüst 1892: 175	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Spongatractus							
Spongatractus pleurosigma	–	n.d.	–	Rüst 1892: 160	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
***Spongentactinella* (166)**							
Spongentactinella abstrusa	E?	–	–	Aitchison 1993b: 120	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Spongentactinella corynacantha	E?	–	–	Nazarov & Ormiston 1983a: 460	Upper Devonian	Frasnian	Sadler Range, SE Cap Creek Gap, Canning Basin, Western Australia
Spongentactinella faceta	E?	–	–	Nazarov & Ormiston 1993: 34	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Spongentactinella faceta	E?	n.n.	–	Nazarov 1988: 130	Upper Devonian	Famenian	Zapadno Valavskaya borehole 1-R, Pripyat Depression, Belarus
Spongentactinella intracata	E?	–	–	Aitchison 1993b: 120	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Spongentactinella olafi	E?	–	–	Afanasieva 2000a: 82	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Spongentactinella windjanensis	E?	–	–	Nazarov *in* Nazarov *et al.* 1982: 170	Upper Devonian	Frasnian	Emanuel Range, SW Longs Well, Canning Basin, Western Australia
***Spongentactinia* (121)**							
Spongentactinia concinna	E	–	T	Aitchison 1993b: 116	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Spongentactinia exquisita	E	–	–	Aitchison 1993b: 117	Upper Devonian	lower Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Spongentactinia flexa	E	–	–	Won 1997b: 404	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Spongentactinia* (121) continuation**							
Spongentactinia fungosa	E	–	T	Nazarov 1975: 75	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Spongentactinia indisserta	E	–	–	Nazarov 1975: 76	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Spongentactinia inusitata	E	–	–	Won 1997b: 406	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Spongentactinia marina	E	–	–	Afanasieva & Amon 2011: 1507	Upper Devonian	Famennian	Zadonsk Formation, W Lekkeyaginsk-65, Saremboi-Lekkeyaga, Timan-Pechora Basin, Russia
Spongentactinia nupera	E	–	–	Nazarov *in* Nazarov *et al.* 1981: 84	Upper Devonian	Famennian	Duksundinsk Formation, along Duksunda River, Magadan, Russia
Spongentactinia olafi	E	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
Spongentactinia polaris	E	–	–	Afanasieva & Amon 2011: 1505	Upper Devonian	lower Famennian	Zadonsk Formation, W Lekkeyaginsk-65, Saremboi-Lekkeyaga, Timan-Pechora Basin, Russia
Spongentactinia rigida	E	–	–	Amon, Braun & Chuvashov 1990: 123	Lower Permian	Artinskian	Shelyvaginsk Formation, around Sim Town, Chalyabinskaya region, Urals, Russia
Spongentactinia shaijingpoensis	E	–	–	Wang *in* Wang *et al.* 2000: 247	Middle Devonian	Givetian	Changyucun Formation, Shaijingpo section, Xianyun County, Yunnan, China
Spongentactinia subtiradiata	E	–	–	Nazarov 1975: 76	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Spongentactinia? ambigua	E	–	–	Won 1997b: 408	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Spongentactinia? incerta	E	–	–	Nestell, Pope & Nestell 2012: 236	Upper Carboniferous	Moscovian	Mouse Creek Formation, Excello Shale Member, south-central Iowa, USA
Spongentactinia? mira	E	–	–	Won 1997b: 410	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Spongentactinia? simensis	E	–	–	Amon, Braun & Chuvashov 1990: 123	Lower Permian	Artinskian	Shelyvaginsk Formation, around Sim Town, Chalyabinskaya region, Urals, Russia
***Spongocoelia* (326)**							
Spongocoelia citreum	–	n.d.	Td	Hinde 1899a: 52	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Spongocoelia kamitakarensis	IS	–	–	Furutani 1990: 48	Upper Silurian	Gorstian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan
Spongocoelia oliva	–	n.d.	–	Hinde 1899a: 52	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Spongocoelia parvus	IS	–	T	Furutani 1990: 47	Upper Silurian	Gorstian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan
Spongocyrtis							
Spongocyrtis eurydictyum	–	n.d.	–	Rüst 1892: 181	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Spongodictyon							
Spongodictyon triquetrum	–	n.d.	–	Rüst 1892: 140	Lower Devonian	–	Southern Urals, Russia
Spongodiscus							
Spongodiscus acinus	–	n.d.	–	Hinde 1899a: 54	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Spongodiscus cribrarius	–	n.d.	–	Hinde 1899a: 54	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Spongodiscus herzynicus	–	n.d.	–	Rüst 1892: 172	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Spongodiscus* (continuation)**							
Spongodiscus punctus	–	n.d.	Tnr, Th	Hinde 1899a: 54	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Spongodiscus scutulatus	IS	–	–	Hinde 1899a: 55	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Spongodiscus sphaereatus	IS	–	–	Liu 1992: 129	Upper Carboniferous	Bashkirian	Houxia Formation, Ewirgol-Houxia districts of Ulumuqi, Xinjiang, China
Spongodiscus? lenticulatus	IS	–	–	Won 1983: 165	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Spongodruppa							
Spongodruppa ornithopus	–	n.d.	–	Rüst 1892: 160	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Spongodruppa triradiata	–	n.d.	–	Rüst 1892: 159	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Spongoentactinella							
Spongoentactinella bella	E	–	–	Wang *in* Wang *et al.* 2012: 111	Upper Devonian	Famennian	Shiti Reservoir Formation, Shiwu road section, Guangxi Zhuang Region, SW China
Spongoentactinella borealia	E	–	–	Wang 1997: 156	Upper Devonian	Famennian	Gennaren Formation, S Utubulak, NW Jungar Basin, Xinjiang, China
Spongoentactinella micrococcua	E	–	–	Wang *in* Wang *et al.* 2012: 111	Upper Devonian	Frasnian	Shiti Reservoir Formation, Shiwu road section, Guangxi Zhuang Region, SW China
Spongoentactinella paracorynacantha	E	–	–	Wang *in* Wang *et al.* 2012: 111	Upper Devonian	Frasnian	Shiti Reservoir Formation, Shiwu road section, Guangxi Zhuang Region, SW China
Spongolonche							
Spongolonche lens	E	–	–	Hinde 1899a: 55	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
***Spongomassa* (47)**							
Spongomassa gigantea	Ar	–	T	Won *in* Won & Below 1999: 337	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Spongomassa nannosphaera	Ar	–	–	Won *in* Won & Below 1999: 338	Middle Cambrian	–	Inca Formation, Georgina Basin, Queensland, Australia
Spongopila							
Spongopila juniperina	–	n.d.	–	Rüst 1892: 149	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Spongoplegma							
Spongoplegma australe	IS	–	–	Hinde 1899a: 44	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Spongoplegma brevisphaera	–	n.d.	–	Aberdeen 1940: 134	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Spongoplegma longispinosa	–	n.d.	–	Aberdeen 1940: 134	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Spongoplegma priscum	–	n.d.	–	Hinde 1890: 48	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Spongoprunum							
Spongoprunum holodictyosum	–	n.d.	–	Rüst 1892: 159	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Spongoprunum oligoporum	–	n.d.	–	Ruedemann & Wilson 1936: 1577	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Spongoprunum trispinosum	–	n.d.	–	Rüst 1892: 159	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
***Spongosphaera* (122)**							
Spongosphaera crasseptata	E	–	–	Wang *in* Wang *et al.* 2012: 112	Upper Devonian	Famennian	Shiti Reservoir Formation, Shiwu road section, Guangxi Zhuang Region, SW China
Spongosphaera grandispongiosa	E	–	T, Th	Won 1997b: 410	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Spongosphaera induta	–	n.d.	–	Rüst 1892: 150	Lower Devonian	–	Southern Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Spongosphaera* (122) continuation**							
Spongosphaera trendalliana	E	–	–	Won 1997b: 412	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
Spongosphaera tritestacea	–	n.d.	–	Rothpletz 1880: 449	Lower Silurian	Telchyian	Langenstriegis, Frankenberg/Sa., Germany
Spongosphaera tritestacea	–	n.d.	–	Rüst 1892: 150	Lower Silurian	–	Cabrières, Hérault, France
Spongosphaera varia	E	–	Ts	Won 1997b: 412	Upper Devonian	Frasnian	Gogo Formation, Pillara Range, Canning Basin, Western Australia
***Spongosphaeradiscus* (247)**							
Spongosphaeradiscus shaiwaensis	S	–	–	Wang *in* Wang & Shang 2001: 118	Upper Permian	Wuchiapingian	Shaiwa Group, Shaiwa, Ziyun County, Guizhou, China
Spongotripus							
Spongotripus concentricus	L	–	Th, Ts	Rüst 1892: 173	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Spongotripus fenestratus	IS	–	–	Hinde 1899a: 55	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Spongotripus patella	IS	–	Td	Hinde 1899a: 55	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Spongotripus ruestae	L	–	–	Ormiston & Lane 1976: 168	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Spongotripus sinensis	L	–	–	Liu 1992: 129	Upper Carboniferous	Bashkirian	Houxia Formation, Ewirgol-Houxia districts of Ulumuqi, Xinjiang, China
Spongotripus xintianensis	E?	–	–	Sheng & Wang 1982: 61	Middle Devonian	Givetian	Qizigiao Formation, Matangwuo, Xintian district, Hunan, China
Spongotrochus							
Spongotrochus elongatus	–	n.d.	–	Rüst 1892: 173	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Spongotrochus primaevus	–	n.d.	–	Ruedemann & Wilson 1936: 1577	Lower Ordovician	Floian	Normanskill chert, Fly Summit, Washington County, New York, USA
Spongotrochus? *discoidalis*	S	n.c.	–	Won 1983: 164	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Spongurus							
Spongurus lacunosus	–	n.d.	–	Rüst 1892: 159	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Spongurus plantaeformis	–	n.d.	–	Rüst 1892: 159	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Spongurus variabilis	–	n.d.	–	Rüst 1892: 158	Lower Devonian	–	Southern Urals, Russia
***Srakaeosphaera* (327)**							
Srakaeosphaera minuta	–	n.d.	Td	Sashida *in* Sashida *et al.* 1997: 12	Middle Permian	Capitanian	Sra Kaeo Group, Ban Bo Rae, Sra Kaeo, Thailand
Stauracontium							
Stauracontium inaequale	E	–	–	Rüst 1892: 145	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Stauracontium incompletum	–	n.d.	–	Rüst 1892: 145	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Stauracontium xiphophorum	E	–	–	Rüst 1892: 145	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Stauralastrum							
Stauralastrum aculeatum	L	–	–	Rüst 1892: 171	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
***Staurentactinia* (186)**							
Staurentactinia nazarovi	L	–	T	Schwartzapfel & Holdsworth 1996: 202	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Staurodoras							
Staurodoras brevispinosa	–	n.d.	–	Aberdeen 1940: 136	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Staurodoras gracilis	–	n.d.	–	Hinde 1890: 49	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Staurodruppa* (123)**							
Staurodruppa foxii	E	–	–	Hinde 1899b: 217	Middle Devonian	Givetian	Chypons Farm, Mullion Parrish, Cornwall, England, UK
Staurodruppa nana	E	–	–	Hinde 1899a: 52	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Staurodruppa nucula	E	–	–	Hinde 1899a: 52	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Staurodruppa praelonga	E	–	Ts	Hinde 1899a: 51	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Staurodruppa? prolata	E	–	–	Foreman 1963: 275	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Staurolonche							
Staurolonche davidi	E	–	–	Hinde 1899a: 46	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Staurolonche insignis	E	–	–	Rüst 1892: 144	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Staurolonche laterna	E	–	–	Hinde 1899a: 47	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Staurolonche macracantha	E	–	–	Rüst 1892: 144	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Staurolonche micropora	–	n.d.	–	Rüst 1892: 143	Lower Silurian	–	Cabrières, Hérault, France
Staurolonche scitula	–	n.d.	–	Hinde 1899a: 47	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Staurolonche spinigera	–	n.d.	–	Rüst 1892: 144	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Staurolonche tenella	E	–	–	Hinde 1899a: 47	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Staurolonchidium							
Staurolonchidium coheni	E	–	–	Rüst 1892: 144	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Staurolonchidium obliquum	–	n.d.	–	Hinde 1899a: 47	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
***Stauroplegma* (328)**							
Stauroplegma barbatum	–	n.d.	–	Hinde 1890: 50	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Stauroplegma brevispina	–	n.d.	Td	Hinde 1890: 50	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Stauroplegma compressum	–	n.d.	–	Hinde 1890: 50	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Stauroplegma diffusum	–	n.d.	–	Hinde 1890: 50	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Stauroplegma houxiaense	–	n.d.	–	Liu 1992: 128	Upper Carboniferous	Bashkirian	Houxia Formation, Ewirgol-Houxia districts of Ulumuqi, Xinjiang, China
Stauroplegma lepidum	S?	–	–	Sheng & Wang 1982: 60	Middle Devonian	Givetian	Qizigiao Formation, Matangwuo, Xintian district, Hunan, China
Stauroplegma nanjingensis	–	n.d.	–	Zhang, Wu & Liu 1992: 299	Upper Permian	Changhsingian	Dalong Formation, Zhengpanshan near Longtan, E Nanjing, China
Stauroplegma pulcherrimum	S?	–	–	Sheng & Wang 1982: 60	Middle Devonian	Givetian	Qizigiao Formation, Matangwuo, Xintian district, Hunan, China
Stauroplegma robustospina	S?	–	–	Sheng & Wang 1982: 60	Middle Devonian	Givetian	Qizigiao Formation, Matangwuo, Xintian district, Hunan, China
Stauroplegma tianshanense	–	n.d.	–	Liu 1992: 128	Upper Carboniferous	Bashkirian	Houxia Formation, Ewirgol-Houxia districts of Ulumuqi, Xinjiang, China
Staurosphaera							
Staurosphaera crassispina	–	n.d.	–	Ruedemann & Wilson 1936: 1570	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Staurosphaera fragilis	–	n.d.	–	Rüst 1892: 143	Lower Silurian	–	Cabrières, Hérault, France
Staurosphaera ornata	E	–	–	Hinde 1899a: 46	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Staurosphaera pusilla	E	–	–	Hinde 1899a: 46	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Staurosphaera quadrangularis	–	n.d.	–	Rüst 1892: 143	Lower Silurian	–	Cabrières, Hérault, France

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Staurosphaera* (continuation)**							
Staurosphaera rotunda	–	n.d.	–	Aberdeen 1940: 135	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Staurosphaera sancta	–	n.d.	–	Ruedemann & Wilson 1936: 1570	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Staurosphaera setispina	–	n.d.	–	Rüst 1892: 143	Lower Devonian	–	Southern Urals, Russia
Staurosphaerella							
Staurosphaerella setispiniformis	–	n.d.	–	Demanet 1938: 29	Lower Carboniferous	Visean	Dinant Synclinorium, Belgium
Staurostylus							
Staurostylus caucasicus	–	n.d.	–	Khabakov 1932: 224	Carboniferous	–	Left river bank of Kala-kulak, Elbrus, Caucasus, Russia
Staurostylus tenuispinus	–	n.d.	–	Rüst 1892: 143	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Staurostylus varispinatus	–	n.d.	–	Aberdeen 1940: 135	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Staurostylus xiphophorus	–	n.d.	Td	Rüst 1892: 143	Lower Devonian	–	Southern Urals, Russia
Stichocapsa							
Stichocapsa anguillula	–	n.d.	–	Rüst 1892: 192	Lower Devonian	–	Southern Urals, Russia
Stichocapsa biceps	–	n.d.	–	Rüst 1892: 191	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Stichocapsa bukkiana	–	n.d.	–	Rüst 1892: 191	Carboniferous	–	Bükk-Gebirge, Inner Western Carpathians, Hungary
Stichocapsa citriformis	–	n.d.	–	Rüst 1892: 191	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Stichocapsa ellipsoides	–	n.d.	–	Rüst 1892: 191	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Stichocapsa elpenor	–	n.d.	–	Rüst 1892: 192	Lower Devonian	–	Southern Urals, Russia
Stichocapsa gravida	–	n.d.	–	Rüst 1892: 191	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Stichocapsa pupa	–	n.d.	–	Rüst 1892: 191	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Stichocapsa taenia	–	n.d.	–	Rüst 1892: 192	Lower Devonian	–	Southern Urals, Russia
Stichopera							
Stichopera aculeata	–	n.d.	–	Rüst 1892: 186	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Stigmosphaera							
Stigmosphaera echinata	–	n.d.	–	Hinde 1899b: 215	Middle Devonian	Givetian	Chypons Farm, Mullion Parrish, Cornwall, England, UK
Stigmosphaera mira	E	–	Td	Rüst 1892: 135	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Stigmosphaera rothpletzii	E	–	–	Rüst 1892: 135	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Stigmosphaera suspecta	E	–	–	Rüst 1892: 135	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
***Stigmosphaerostylus* (124)**							
Stigmosphaerostylus bazhaiensis	E	–	–	Wang *in* Wang & Luo 2009: 136	Upper Devonian	Frasnian	Xiangshuidong Formation, Bazhai, Ziyun County, Guizhou, China
Stigmosphaerostylus cubicus	E	–	–	Luo, Aitchison & Wang 2002: 116	Middle Devonian	Givetian	Tanhe Formation, Wuxiangling section, S of Nanning, Guangxi Zhuang Region, SW China
Stigmosphaerostylus dobruskinae	E	–	–	Kozur & Mostler 1989: 188	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Stigmosphaerostylus favusa	E	–	–	Maldonado & Noble 2010: 85	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Stigmosphaerostylus inaequalis	–	n.d.	–	Hinde 1899b: 216	Middle Devonian	Givetian	Chypons Farm, Mullion Parrish, Cornwall, England, UK
Stigmosphaerostylus istanbulensis	E	–	–	Noble, Tekin, Gedik & Pehlivan 2008: 51	Lower Carboniferous	Tournaisian	Baltalimani Formation, Istanbul, Turkey
Stigmosphaerostylus leveni	E	–	–	Kozur & Mostler 1989: 189	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Stigmosphaerostylus* (124) continuation**							
Stigmosphaerostylus meyeni	E	–	–	Kozur & Mostler 1989: 189	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Stigmosphaerostylus notabilis	E	–	Ts	Rüst 1892: 142	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Stigmosphaerostylus qinzhouensis	E	–	–	Wang *in* Wang *et al.* 2012: 110	Lower Carboniferous	Tournaisian	Shijia Formation, Bancheng, Qinzhou area, Guangxi Zhuang Region, SW China
Stigmosphaerostylus sakmaraensis	E	–	–	Kozur & Mostler 1989: 189	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Stigmosphaerostylus sakmaraensis elevatus	E	–	–	Kozur & Mostler 1989: 190	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Stigmosphaerostylus sakmaraensis sakmaraensis	E	–	–	Kozur & Mostler 1989: 189	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Stigmosphaerostylus wildei	E	–	–	Noble & Jin 2010: 125	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts., Culberson County, W Texas, USA
Stigmosphaerostylus yaoi	E	–	–	Kozur & Mostler 1989: 190	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Stigmosphaerostylus? *coronatus*	E	–	–	Kozur & Mostler 1989: 188	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Stigmosphaerostylus? *variospinus*	E	–	–	Kozur & Mostler 1989: 190	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
***Stylactinosphaera* (305)**							
Stylactinosphaera prima	IS (O&F)	–	T	Noble 1994: 36	Middle Silurian	Homerian	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA
Stylodictya							
Stylodictya polaris	E	–	–	Rüst 1892: 169	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Stylodictya zittelii	–	n.d.	–	Rüst 1892: 168	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Stylodiscus							
Stylodiscus dictyosus	E?	–	–	Rüst 1892: 162	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Stylosphaera							
Stylosphaera acuta	E	–	–	Rüst 1892: 142	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Stylosphaera obtusa	E	–	–	Hinde 1899a: 45	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Stylosphaera quasiobtusa	–	n.d.	–	Aberdeen 1940: 135	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Stylosphaera vetusta	E	–	–	Hinde 1899a: 46	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Stylosphaera? *magnaspina*	S	–	–	Noble 1994: 39	Upper Silurian	Gorstian	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA
Stylostaurus							
Stylostaurus hindei	–	n.d.	–	Ruedemann & Wilson 1936: 1570	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Stylotrochus							
Stylotrochus dolfussi	–	n.d.	–	Rüst 1892: 173	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Styptosphaera							
Styptosphaera antiqua	–	n.d.	–	Hinde 1890: 47	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Subechidnina* (58)**							
Subechidnina delicata	Ar	–	–	Won & Iams 2002: 26	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Subechidnina florea	Ar	–	–	Won & Iams 2002: 26	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Subechidnina gracilis	Ar	–	Ts	Won & Iams 2002: 27	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
Subechidnina pressa	Ar	–	–	Won & Iams 2002: 27	Upper Cambrian	Stage 10	Cow Head Group, Western Newfoundland, Canada
***Svalbardospiculum* (68)**							
Svalbardospiculum arenigium	Ar	–	T	Maletz & Bruton 2007: 259	Lower Ordovician	Floian	Valhallfonna Formation, Buldrebreen arm, Ny Frieslan, Spitsbergen, Norway
***Syntagentactinia* (135)**							
Syntagentactinia afflicata	E	n.n.	–	Nazarov 1988: pl. 11 fig. 6	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Syntagentactinia afflicta	E	–	–	Nazarov & Ormiston 1990: 19	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Syntagentactinia afflicta	E	inv.	–	Nazarov & Ormiston 1993: 40	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Syntagentactinia biocculosa	E	–	T	Nazarov *in* Nazarov & Popov 1980: 56	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Syntagentactinia excelsa	E	–	–	Nazarov & Ormiston 1993: 40	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Syntagentactinia excelsa	E	n.n.	–	Nazarov 1988: 122	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Syntagentactinia pauca	E	–	–	Nazarov *in* Nazarov & Popov 1980: 57	Middle Ordovician	Darriwilian	Bestomaksk Formation, Chagan River, Chingiz Range, Kazakhstan
Syntagentactinia pentarhachia	–	n.n.	–	Li 1991: 75	Upper Silurian	Gorstian	Mayila Complex, Keerhada, S Mayila Mt., Xinjiang, China
Syntagentactinia? angulata	E	–	–	Pouille & Danelian *in* Pouille *et al.* 2014: 152	Middle Ordovician	upper Darriwilian	Shundy Formation, Balkhash region, Kazakhstan
***Tamonella* (248)**							
Tamonella aculeata	S	–	–	Feng *in* Feng *et al.* 2006a: 37	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Tetracircinata* (206)**							
Tetracircinata reconda	L	–	Ts	Nazarov & Ormiston 1984: 74	Lower Permian	Artinskian	Makyutov Complex, Sim Village, Chalyabinskaya Region, Kazakhstan
***Tetraedroclathrum* (158)**							
Tetraedroclathrum cabrierense	–	n.n.	Tn	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
***Tetragregnon* (207)**							
Tetragregnon iowaensis	L	–	–	Nestell, Pope & Nestell 2012: 239	Upper Carboniferous	Moscovian	Mouse Creek Formation, Excello Shale Member, south-central Iowa, USA
Tetragregnon japonicum	L	–	–	Sashida & Tonishi 1985: 13	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Tetragregnon longispinatum	L	–	–	Feng *in* Feng *et al.* 2006b: 827	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Tetragregnon nitidus	L	–	–	Nazarov & Ormiston 1985: 23	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Tetragregnon pyramidatus	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 73	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Tetragregnon scalpratus	L	–	–	Nazarov & Ormiston 1985: 23	Middle Permian	Capitanian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Tetragregnon* (207) continuation**							
Tetragregnon sphaericus	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 72	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Tetragregnon sycamorensis	L	–	T	Ormiston & Lane 1976: 167	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Tetragregnon sycamorensis tricarinatus	L	–	–	Won 1983: 166	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Tetragregnon tunicatus	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 74	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Tetragregnon vimineum	L	–	–	Amon, Braun & Chuvashov 1990: 124	Lower Permian	Artinskian	Shelyvaginsk Formation, around Sim Town, Chalyabinskaya region, Urals, Russia
Tetrapylonium							
Tetrapylonium ovatum	–	n.d.	–	Rüst 1892: 174	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Tetraregnon							
Tetraregnon permicus	E	–	–	Kozur & Mostler 1989: 185	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
***Tetrasphaera* (329)**							
Tetrasphaera kuruktagensis	S	–	Th, Ts	Wang *in* Wang *et al.* 2008: 397	Middle Ordovician	Dapingian	Heituao Formation, Tarim Basin, Kuruktag region, Xinjiang, China
Tetraspongentactinia							
Tetraspongentactinia riescheidensis	L	–	–	Won & Seo 2010: 249	Lower Carboniferous	Visean	Bergisches Land, N Westfalia, Germany
Tetraspongentactinia triporosa	L	–	–	Won & Seo 2010: 249	Lower Carboniferous	Visean	Bergisches Land, N Westfalia, Germany
***Tetraspongoactinia* (208)**							
Tetraspongoactinia holdsworthi	L	–	T	Won 1998: 257	Lower Carboniferous	Tournaisian	Oese, Rheinische Schiefergebirge, Germany
Tetraspongodiscus							
Tetraspongodiscus stauracanthus	S	–	–	Feng *in* Feng *et al.* 2006a: 39	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Tetraspongodiscus tetragonius	S	–	–	Feng *in* Feng *et al.* 2006a: 41	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Tetratormentum* (209)**							
Tetratormentum acutum	L	–	–	Sashida & Tonishi 1988: 532	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Tetratormentum crateris	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 102	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Tetratormentum diremptum	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 103	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Tetratormentum globiforme	L	–	–	Sashida & Tonishi 1988: 533	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Tetratormentum magniporosa	L	–	–	Won & Seo 2010: 251	Lower Carboniferous	Visean	Bergisches Land, N Westfalia, Germany
Tetratormentum nandanensis	L	–	–	Wu & Feng *in* Wu *et al.* 2010: 889	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Tetratormentum narthecium	L	–	T	Nazarov & Ormiston 1985: 42	Upper Carboniferous	Gzhelian	E of Saraktash, Nikol Village, Ural River, Bashkirsk Region, Urals, Russia
Tetratormentum ormistoni	L	–	–	Nestell & Nestell 2010: 48	Middle Permian	Capitanian	Bell Canyon Formation, Apache Mountains, Culberson County, W Texas, USA
Tetratormentum? condensum	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 104	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Tetrentactinia* (167)**							
Tetrentactinia barysphaera	E	–	T	Foreman 1963: 282	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Tetrentactinia gracilispinosa	E	–	–	Foreman 1963: 284	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Tetrentactinia incondita	E	–	–	Nazarov 1973a: 698	Upper Devonian	Frasnian	Egindinsk Formation, Aitpaika River, N Mugodazhar, S Urals, Kazakhstan
Tetrentactinia inopia	E	–	–	Nazarov *in* Nazarov *et al.* 1981: 84	Upper Devonian	Famennian	Duksundinsk Formation, along Duksunda River, Magadan, Russia
Tetrentactinia puncticulosa	E	–	–	Nazarov 1975: 74	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Tetrentactinia quadrispinosa	E	–	–	Foreman 1963: 284	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Tetrentactinia somphosphaera	E	–	–	Foreman 1963: 283	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Tetrentactinia somphozona	E	–	Ts	Foreman 1963: 283	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Tetrentactinia spinulosa	E	–	–	Kiessling & Tragelehn 1994: 238	Upper Devonian	Famennian	Frankenwald, north Bavaria, Germany
Tetrentactinia spongacea	E	–	–	Foreman 1963: 284	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Tetrentactinia teuchestes	E	–	–	Foreman 1963: 283	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
Tetrentactinia veles	E	–	Td	Foreman 1963: 283	Upper Devonian	Famennian	Huron member, Ohio Shale, Ohio, USA
***Thecentactinia* (126)**							
Thecentactinia? indeterminata	E	–	–	Nazarov 1975: 72	Lower Silurian	–	Sakmarsk Formation, Bol'shoy Abimevo Village, Bashkortostan Region, S Urals, Russia
Thecosphaera							
Thecosphaera hexpenetrata	–	n.d.	–	Aberdeen 1940: 134	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Thecosphaera sexactis	E	–	–	Rüst 1892: 137	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Thecosphaera sicula	–	n.d.	–	Rüst 1892: 137	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Theocampe							
Theocampe bulbosa	–	n.d.	–	Rüst 1892: 185	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Theodiscus							
Theodiscus aculeatus	–	n.d.	–	Hinde & Fox 1895: 639	Carboniferous	Serpukhovian-Bashkirian	Codden Hill bed, Devon, England, UK
Theodiscus brachyacanthus	–	n.d.	–	Rüst 1892: 163	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Theodiscus convexus	–	n.d.	–	Rüst 1892: 163	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Theodiscus gigas	–	n.d.	–	Rüst 1892: 163	Lower Silurian	–	Cabrières, Hérault, France
Theodiscus hastatus	E	–	–	Hinde 1899a: 53	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Theodiscus planus	–	n.d.	–	Rüst 1892: 163	Lower Silurian	–	Cabrières, Hérault, France
Theosyringium							
Theosyringium praecox	–	n.d.	–	Rüst 1892: 184	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
***Tlecerina* (159)**							
Tlecerina exilis	E	–	–	Furutani 1983: 111	Lower Devonian	Emsian	Nakahata Formation, S Mt. Yokokurayama, Ochi Town, Kochi, Shikoku, Japan
Tlecerina fenestrata	E	–	–	Furutani 1983: 111	Lower Devonian	Emsian	Nakahata Formation, S Mt. Yokokurayama, Ochi Town, Kochi, Shikoku, Japan
Tlecerina horrida	E	–	T	Furutani 1983: 110	Lower Devonian	Emsian	Nakahata Formation, S Mt. Yokokurayama, Ochi Town, Kochi, Shikoku, Japan
Tlecerina isensis	E	–	–	Kurihara & Sashida 2000: 62	Lower Devonian	Emsian	Shibasudani Formation, Shibasudani Valley, Ohno City, Fukui Prefecture, Japan

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Tormentum* (216)**							
Tormentum aequilateralis	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 97	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Tormentum aequilateralis orbiculatum	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 97	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Tormentum circumfluum	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 100	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Tormentum circumfusum	L	–	–	Nazarov & Ormiston 1985: 40	Lower Permian	Sakmarian	Maloik Formation, Don Village, Ural River, Orenburgskaya Region, S Urals, Russia
Tormentum coarctatum	L	–	–	Nazarov & Ormiston 1993: 44	Upper Carboniferous	Moscovian	Popovka River in Prikolyma area, Magadan Region, Russia
Tormentum complicatum	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 100	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Tormentum delicatum	L	–	–	Nazarov & Ormiston 1985: 40	Middle Permian	Roadian	Bell Canyon Formation, Guadalupe Mts, Culbertson County, W Texas, USA
Tormentum orientalis	L	–	–	Nazarov & Ormiston 1993: 44	Upper Carboniferous	Moscovian	Popovka River in Prikolyma area, Magadan Region, Russia
Tormentum pervagatum	L	–	–	Nazarov & Ormiston 1985: 40	Upper Carboniferous	Gzhelian	E of Saraktash, Nikol Village, Ural River, Bashkirsk Region, Urals, Russia
Tormentum protei	L	–	T	Nazarov & Ormiston 1983b: 376	Upper Carboniferous	Gzhelian	E of Saraktash, Nikol Village, Ural River, Bashkirsk Region, Urals, Russia
Tormentum protei	–	inv.	–	Nazarov & Ormiston 1985: 40	Upper Carboniferous	Gzhelian	E of Saraktash, Nikol Village, Ural River, Bashkirsk Region, Urals, Russia
Tormentum protei pannosum	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 95	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Tormentum rotundatum	L	–	–	Feng *in* Feng *et al.* 2006b: 831	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Tormentum sertulum	L	–	–	Nazarov & Ormiston 1985: 41	Middle Permian	Capitanian	Bell Canyon Formation, Hegler Limestone, Culberson County, W Texas, USA
Tormentum subrotundum	L	–	–	Nazarov *in* Isakova & Nazarov 1986: 99	Upper Carboniferous	Gzhelian	Saraktash, Nikol Village, Southern Urals, Russia
Tormentum? *inflatum*	L	–	–	Nazarov & Ormiston 1985: 41	Middle Permian	Capitanian	Bell Canyon Formation, Hegler Limestone, Culberson County, W Texas, USA
***Totollum* (232)**							
Totollum blomei	N?	–	T	Schwartzapfel & Holdsworth 1996: 146	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Totollum undulatum	N?	–	–	Schwartzapfel & Holdsworth 1996: 144	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Totollum ziegleri	N?	–	–	Schwartzapfel & Holdsworth 1996: 145	Upper Devonian	upper Famennian	Woodford Formation, Locality 1, Carter County, Oklahoma, USA
Triactiscus							
Triactiscus lanceola	E?	–	–	Hinde 1899a: 53	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
***Triactofenestrella* (178)**							
Triactofenestrella nicolica	L	–	Ts	Nazarov & Ormiston 1984: 79	Upper Carboniferous	Gzhelian	Makyutov Complex, Tarangul River, Kosistek Village, Southern Ural, Kazakhstan
***Triaenoentactinosphaera* (169)**							
Triaenoentactinosphaera regularia	E	–	Ts	Wang 1997: 156	Upper Devonian	Famennian	Gennaren Formation, S Utubulak, NW Jungar Basin, Xinjiang, China
***Triaenosphaera* (168)**							
Triaenosphaera hebes	E	–	–	Won 1983: 167	Lower Carboniferous	Visean	Rheinisches Schiefergebirge, Frankenwald, Germany
Triaenosphaera longispina	E	–	–	Sashida *in* Sashida *et al.* 2000b: 250	Lower Carboniferous	Tournaisian	Khlong Kon Limestone, along Highway 42, Saba Yoi area, SE Thailand

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Triaenosphaera* (168) continuation**							
Triaenosphaera megacantha	E	–	–	Feng *in* Feng *et al.* 2007: 29	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Triaenosphaera minuscula	E	–	–	Braun 1989: 89	Lower Carboniferous	upper Tournaisian	Pebbles of siliceous shale from the lower Main-valley near Frankfurt a. M., Germany
Triaenosphaera minutus	E	–	–	Sashida & Tonishi 1988: 530	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
Triaenosphaera sicarius	–	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Triaenosphaera sicarius	E	–	T	Deflandre 1973c: 1150	Lower Carboniferous	Visean	Cabrières, Hérault, France
Triaenosphaera tetraculeata	E	–	–	Park & Won 2012: 55	Lower Carboniferous	Tournaisian	Woodman Formation, South Lakeside Mts., Tooele County, Utah, USA
Triaenosphaera variabilis	E	–	–	Feng *in* Feng *et al.* 2007: 29	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Triaenosphaera? bareillensis	E	–	–	Gourmelon 1986: 187	Lower Carboniferous	Tournaisian	Hautes-Pyrénées, France
Triaenosphaera? leherissei	E	–	–	Gourmelon 1987: 66	Lower Carboniferous	Tournaisian	Cabrières, Hérault, France
Tricolocapsa							
Tricolocapsa abdominalis	–	n.d.	–	Rüst 1892: 186	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Tricolocapsa anceps	–	n.d.	–	Rüst 1892: 185	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Tricolocapsa grandaeva	–	n.d.	–	Rüst 1892: 185	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Tricolocapsa thoracica	–	n.d.	–	Rüst 1892: 186	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
***Trifidospongus* (179)**							
Trifidospongus angustus	L	–	–	Noble & Renne 1990: 389	Middle Permian	Roadian	Dekkas Formation, Eastern Klamath Mountains, California, USA
Trifidospongus dekkasensis	L	–	Ts	Noble & Renne 1990: 388	Middle Permian	Roadian	Dekkas Formation, Eastern Klamath Mountains, California, USA
***Trigonosphaera* (306)**							
Trigonosphaera calvata	IS (O&F)	–	T	Feng *in* Feng *et al.* 2004a: 142	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Trilacertus* (187)**							
Trilacertus baumgartneri	L	–	Ts	Cheng 1986: 178	Lower Carboniferous	Serpukhovian	Sand Branch Member of Caney Formation, Pittsburg County, Oklahoma, USA
Trilacertus delicatus	L	–	–	Cheng 1986: 178	Upper Carboniferous	Bashkirian	Wesley Formation, Turnpike section, Pittsburg County, Oklahoma, USA
Trilacertus densus	L	–	–	Cheng 1986: 179	Lower Carboniferous	Serpukhovian	Sand Branch Member of Caney Formation, Pittsburg County, Oklahoma, USA
***Trilonche* (127)**							
Trilonche chiangdaoensis	E	–	–	Wonganan & Caridroit 2005: 46	Upper Devonian	Famennian	Chiang Dao chert, along the Road 1150 for Phrao City, Chiang Mai, northern Thailand
Trilonche cimelia	E	–	–	Ormiston & Lane 1976: 167	Lower Carboniferous	Tournaisian	Sycamore Limestone, southern Arbuckle Mountains, Oklahoma, USA
Trilonche crassus	E	–	–	He & Feng *in* He *et al.* 2011: 491	Upper Permian	Changhsingian	Talung Formation, Hushan section, Nanjing, Jiangsu Region, China
Trilonche dihelicis	E	–	–	Wonganan & Caridroit 2005: 46	Upper Devonian	Famennian	Chiang Dao chert, along the Road 1150 for Phrao City, Chiang Mai, northern Thailand
Trilonche elegans	E	–	–	Hinde 1899a: 48	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Trilonche* (127) continuation**							
Trilonche nanningensis	E	–	–	Luo, Aitchison & Wang 2002: 118	Middle Devonian	Givetian	Tanhe Formation, Wuxiangling section, S of Nanning, Guangxi Zhuang Region, SW China
Trilonche parapalimbola	E	–	–	Wang *in* Wang *et al.* 2003: 133	Upper Devonian	Famennian	Shiti Reservoir Formation, E Bancheng, Guangxi Zhuang Region, SW China
Trilonche pittmani	E	–	–	Hinde 1899a: 48	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Trilonche remosa	E	–	–	Luo, Aitchison & Wang 2002: 119	Middle Devonian	Givetian	Tanhe Formation, Wuxiangling section, S of Nanning, Guangxi Zhuang Region, SW China
Trilonche tanheensis	E	–	–	Luo, Aitchison & Wang 2002: 119	Middle Devonian	Givetian	Tanhe Formation, Wuxiangling section, S of Nanning, Guangxi Zhuang Region, SW China
Trilonche textilis	E	–	–	Feng *in* Feng *et al.* 2007: 25	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Trilonche trifoliolata	E	–	–	Umeda 1997: 422	Upper Silurian	Pridoli	Jyoru Formation, Kurosegawa Belt, Mt. Konomori, Kochi City, Shikoku, Japan
Trilonche vachardi	E	–	–	Wonganan & Caridroit 2005: 48	Upper Devonian	Frasnian	Chiang Dao chert, along the Road 1150 for Phrao City, Chiang Mai, northern Thailand
Trilonche vetusta	E	–	T	Hinde 1899a: 48	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Trilonche xinpoensis	E	–	–	Luo, Aitchison & Wang 2002: 120	Middle Devonian	Givetian	Tanhe Formation, Wuxiangling section, S of Nanning, Guangxi Zhuang Region, SW China
Trilonche yaoi	E	–	–	Zhang, Xia, Dong & Shang 2008: 188	Lower Carboniferous	lower Tournaisian	Bancheng Formation, SE Guangxi, China
Tripilidium							
Tripilidium dissociatum	–	n.d.	–	Rüst 1892: 178	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
***Triplanospongos* (180)**							
Triplanospongos musashiensis	L	–	Ts	Sashida & Tonishi 1988: 536	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
***Triplococcus* (266)**							
Triplococcus acanthicus	S	–	T	Danelian & Popov 2003: 333	Lower Ordovician	Floian	Akzhal Mts. S of Betpak-Dala desert, Kazakhstan
Triplococcus aksuranensis	S	–	–	Pouille & Danelian *in* Pouille *et al.* 2013: 1147	Middle Ordovician	upper Darriwilian	Shundy Formation, Balkhash region, Kazakhstan
***Triposphaera* (330)**							
Triposphaera armata	–	n.d.	–	Hinde 1890: 56	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Triposphaera densa	–	n.d.	–	Hinde 1890: 55	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Triposphaera hastata	–	n.d.	–	Hinde 1890: 55	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Triposphaera maxima	–	n.d.	–	Ruedemann & Wilson 1936: 1576	Lower Ordovician	Floian	Normanskill chert, Fly Summit, Washington County, New York, USA
Triposphaera peachii	–	n.d.	Td	Hinde 1890: 55	Middle Ordovician	Darriwilian	Southern Uplands, Peeblesshire, Scotland, UK
Triposphaera permica	E	–	–	Kozur & Mostler 1989: 191	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Triposphaera permica irregularis	E	–	–	Kozur & Mostler 1989: 191	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Triposphaera permica permica	E	–	–	Kozur & Mostler 1989: 191	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Triposphaera tetrasphaera	E	–	–	Kozur & Mostler 1989: 191	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Triposphaera* (330) continuation**							
Triposphaera tribrachiata	E	–	–	Kozur & Mostler 1989: 191	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Triposphaera uralica	E	–	–	Kozur & Mostler 1989: 192	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Triposphaera woni	E	–	–	Kozur & Mostler 1989: 192	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Triposphaera? *dumitricai*	E	–	–	Kozur & Mostler 1989: 190	Lower Permian	Sakmarian	Sarabil Formation, Sakmarskiy, Orenburgskaya Region, S Urals, Russia
Trissocircus							
Trissocircus primaevus	–	n.d.	–	Rüst 1892: 177	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Trissocircus quadratus	–	n.d.	–	Rüst 1892: 177	Lower Devonian	–	Southern Urals, Russia
Trochodiscus							
Trochodiscus convexus	E	–	–	Rüst 1892: 164	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Trochodiscus diversispinus	–	n.d.	–	Rüst 1892: 164	Lower Silurian	–	Cabrières, Hérault, France
Trochodiscus longispinus	–	n.d.	–	Rüst 1892: 165	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Trochodiscus nicholsoni	E	–	–	Rüst 1892: 164	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Trochodiscus planatus	E	–	–	Hinde 1899a: 53	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Trochodiscus proavus	–	n.d.	–	Rüst 1892: 164	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Trochodiscus recurvispinus	–	n.d.	–	Rüst 1892: 164	Upper Devonian	–	Schaebenholz,Harz Mountains, Elbingerode, Germany
Trochodiscus serrula	–	n.d.	–	Rüst 1892: 164	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Trochodiscus? *dubius*	–	n.d.	–	Hinde 1899b: 218	Middle Devonian	Givetian	Chypons Farm, Mullion Parrish, Cornwall, England, UK
***Tuscaritellum* (233)**							
Tuscaritellum imitatum	N?	–	–	Deflandre 1972a: 3536	Lower Carboniferous	Visean	Cabrières, Hérault, France
Tuscaritellum imitatum	N?	–	Ts	Deflandre 1972b: 16	Lower Carboniferous	Visean	Cabrières, Hérault, France
***Uberinterna* (128)**							
Uberinterna virgispinosum	E	–	T	Sashida & Tonishi 1988: 531	Upper Permian	Changhsingian	Ohirayama Unit, South Chichibu Belt, Kashiwara, Akigawa River, Akiruno City, Tokyo, Japan
***Ulcundia* (331)**							
Ulcundia incomperta	–	n.d.	Td	Nazarov 1974b: 111	Middle Ordovician	Darriwilian	Erzhansk Formation, Lake Sasykser, NE Central Kazakhstan
***Varispiculum* (59)**							
Varispiculum ectospiculatum	Ar	–	–	Won & Iams 2015a: 17	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Varispiculum? *delicatum*	Ar	–	–	Won & Iams 2015a: 18	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Varispiculum? *radiatum*	Ar	–	–	Won & Iams 2015a: 19	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
***Wangia* (332)**							
Wangia biturbinata	–	n.n.	–	Feng 1992: 57	Upper Permian	Changhsingian	Muyinhe Formation, Nanpan, Lancang County, Yunnan, China
Wangia biturbinata	–	n.d.	Td	Feng & Liu 1993: 544	Upper Permian	Changhsingian	Muyinhe Formation, Nanpan, Lancang County, Yunnan, China
Wangia elegans	–	n.n.	–	Feng 1992: 57	Upper Permian	Changhsingian	Muyinhe Formation, Nanpan, Lancang County, Yunnan, China
Wangia elegans	–	n.d.	–	Feng & Liu 1993: 544	Upper Permian	Changhsingian	Muyinhe Formation, Nanpan, Lancang County, Yunnan, China
Wangia kangwuensis	–	n.d.	–	Feng, Fang, Zhang & Huang 1998: 240	Upper Permian	Changhsingian	Papai Formation of Changning-Menglian Belt, Papai Village, Cangyuan County, Yunnan, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Westernbrookia* (60)**							
Westernbrookia cancella	Ar	–	–	Won, Iams & Reed 2007: 521	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Westernbrookia diversa	Ar	–	T	Won, Iams & Reed 2007: 519	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
Westernbrookia incohota	Ar	–	–	Won & Iams 2013: 23	Lower Ordovician	Floian	Cow Head Group, Western Newfoundland, Canada
Westernbrookia ovata	Ar	–	–	Won, Iams & Reed 2007: 519	Lower Ordovician	lower-middle Tremadocian	Cow Head Group, Western Newfoundland, Canada
***Wuyia* (130)**							
Wuyia dongpanica	E	–	T	Feng *in* Feng *et al.* 2007: 33	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
***Xiphachistrella* (28)**							
Xiphachistrella acipensis	Al	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Xiphachistrella acipensis	Al	n.n.	–	Deflandre 1973a: 292	Lower Carboniferous	Visean	Cabrières, Hérault, France
Xiphachistrella acipensis	Al	–	Ts	Deflandre 1973b: 500	Lower Carboniferous	Visean	Cabrières, Hérault, France
***Xiphocabrium* (41)**							
Xiphocabrium rigidum	Al	n.n.	–	Deflandre 1973a: 293	Lower Carboniferous	Visean	Cabrières, Hérault, France
Xiphocabrium rigidum	Al	–	T	Deflandre 1973b: 500	Lower Carboniferous	Visean	Cabrières, Hérault, France
Xiphocabrium? aprelevkensis	Al	n.n.	–	Afanasieva 1997a: 221	Upper Devonian	middle Frasnian	Domanik Formation, borehole Shuda-Yag 1003, SW of Uktha, Timan-Pechora Basin, Russia
***Xiphocladiella* (42)**							
Xiphocladiella cuja	Al	n.n.	–	Deflandre 1960: 216	Lower Carboniferous	Visean	Cabrières, Hérault, France
Xiphocladiella cuja	Al	n.n.	–	Deflandre 1973a: 291	Lower Carboniferous	Visean	Cabrières, Hérault, France
Xiphocladiella cuja	Al	–	T	Deflandre 1973b: 499	Lower Carboniferous	Visean	Cabrières, Hérault, France
Xiphosphaera							
Xiphosphaera brachyacantha	–	n.d.	–	Ruedemann & Wilson 1936: 1569	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Xiphosphaera macracantha	–	n.d.	–	Ruedemann & Wilson 1936: 1569	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Xiphosphaera macrostyla	–	n.d.	–	Rüst 1892: 141	Lower Silurian	–	Cabrières, Hérault, France
Xiphosphaera minax	E	–	–	Hinde 1899a: 45	Middle Devonian	Givetian	Yarramie Formation, Tamworth Belt, northern NSW Australia
Xiphosphaera parva	–	n.d.	–	Ruedemann & Wilson 1936: 1569	Lower Ordovician	Floian	Deepkill shale, Mt. Merino, Columbia County, New York, USA
Xiphosphaera spinifera	–	n.d.	–	Pulfrey 1932: 195	Lower Carboniferous	Serpukhovian	Calver Sough, Derbyshire, England, UK
Xiphostylus							
Xiphostylus ardea	–	n.d.	–	Rüst 1892: 142	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Xiphostylus asper	–	n.d.	–	Rüst 1892: 142	Lower Silurian	–	Langenstriegis, Germany
Xiphostylus inclinatus	–	n.d.	–	Aberdeen 1940: 135	Upper Devonian	Famennian	Caballos Formation, Marathon Basin, Texas, USA
Yujingella							
Yujingella triacantha	S	–	T	Feng *in* Feng *et al.* 2006a: 33	Late Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China

Appendix 1. — Continuation of the inventory of Paleozoic radiolarian species (1880-2016).

Original combination	Order	Status	Type	Original description (authorships of cited taxa)	Age originally assigned to n-b type	Stage	Stratigraphic unit from which n-b type was described
***Zadrappolus* (267)**							
Zadrappolus lunaris	S	–	–	Noble 1994: 32	Upper Silurian	Pridoli	Caballos Novaculite Formation, Payne Hills, Bourland Mts., Marathon Basin, W Texas, USA
Zadrappolus spinosus	S	–	–	Furutani 1990: 37	Upper Silurian	Gorstian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan
Zadrappolus tenuis	S	–	–	Furutani 1990: 36	Upper Silurian	Pridoli	Yoshiki Formation, Hida-gaien Belt, Ichinotani Valley, Fukuji area, Takayama City, Gifu, Japan
Zadrappolus yoshikiensis	S	–	T	Furutani 1990: 35	Upper Silurian	Pridoli	Yoshiki Formation, Hida-gaien Belt, Ichinotani Valley, Fukuji area, Takayama City, Gifu, Japan
Zadrappolus? *hitoeganensis*	S	–	–	Furutani 1990: 37	Upper Silurian	Ludfordian	Hitoegane Formation, Hida-gaien Belt, E of Hitoegane, Fukuji area, Takayama City, Japan
Zadrappolus? *nudus*	S	–	–	Kurihara 2007: 230	Lower Devonian	Emsian	Hitoegane Formation, Hitoegane Forest Road, Hitoegane, Takayama, Japan
***Zhuangodiscus* (275)**							
Zhuangodiscus biacanthus	S	–	–	Wu & Feng *in* Wu *et al.* 2010: 887	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Zhuangodiscus orthacanthus	S	–	T	Wu & Feng *in* Wu *et al.* 2010: 887	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Zhuangodiscus pentacanthus	S	–	–	Wu & Feng *in* Wu *et al.* 2010: 889	Upper Permian	Changhsingian	Dalong Formation, Dongpan section, Dongpan Village, Guangxi Zhuang Region, China
Zonodiscus							
Zonodiscus dentatus	–	n.d.	–	Rüst 1892: 162	Lower Silurian	–	Cabrières, Hérault, France
Zonodiscus macrozona	–	n.d.	–	Rüst 1892: 162	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Zygocircus							
Zygocircus priscus	–	n.d.	–	Rüst 1892: 176	Lower Carboniferous	–	Kieselschiefer, Harz, Germany
Zygocircus simplicissimus	–	n.d.	–	Rüst 1892: 176	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy
Zygosterhanus							
Zygosterhanus quadrupes	–	n.d.	–	Rüst 1892: 177	Upper Permian	–	Sosio Valley Area, Western Sicily, Italy