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Case 3270**ISOMETRINAE Clark, 1917 (Echinodermata, Crinoidea): proposed emendation of spelling to ISOMETRAINAE to remove homonymy with ISOMETRINAE Kraepelin, 1891 (Arachnida, Scorpiones)**

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Abstract. The purpose of this application, under Articles 55 and 29 of the Code, is to remove the homonymy between the crinoid subfamily name ISOMETRINAE Clark, 1917 (type genus *Isometra* Clark, 1908; family ANTEDONIDAE) and the scorpion subfamily name ISOMETRINAE Kraepelin, 1891 (type genus *Isometrus* Ehrenberg in Hemprich & Ehrenberg, 1828; family BUTHIDAE). It is proposed that the entire generic name of *Isometra* should be adopted as the stem, so that the correct spelling of the crinoid subfamily will become ISOMETRAINAE Clark, 1917.

Keywords. Nomenclature; taxonomy; Crinoidea; Scorpiones; ANTEDONIDAE; BUTHIDAE; ISOMETRAINAE; ISOMETRINAE; *Isometra*; *Isometrus*; crinoids; scorpions.

1. The scorpion subfamily name ISOMETRINAE (family BUTHIDAE) was published by Kraepelin (1891, p. 6; as subfamily ISOMETRINI), based on the type genus *Isometrus* Ehrenberg in Hemprich & Ehrenberg, 1828 (plate I, fig. 3) (type species *Buthus* (*Isometrus*) *filum* Ehrenberg in Hemprich & Ehrenberg, 1828 (plate I, fig. 3) by monotypy (a junior synonym of *Scorpio maculatus* DeGeer, 1778 (p. 346), currently *Isometrus maculatus*)). The name *Isometrus* was published as a subgenus of *Buthus* Leach, 1815 (p. 391) (type species *Scorpio occitanus* Amoreux, 1789 (p. 43), currently *Buthus occitanus*, by original designation), and was elevated to rank of genus by Thorell (1876, p. 9). The well-known genus *Isometrus* includes over 20 species, some of them very common scorpions in the Oriental and Australasian regions (see Fet & Lowe, 2000); the type species *Isometrus maculatus* (DeGeer) is cosmopolitan. Many species of *Isometrus* have been actively studied in recent decades (e.g. Gysin & Le Corroller, 1968; Vachon, 1972; Armas, 1976; Kovařík, 1994, 1998). The name ISOMETRINAE Kraepelin, 1891 has been often used (always at subfamily rank) in taxonomic and biological works on BUTHIDAE (e.g. Birula (Byalynitskii-Birulya), 1917; Pavlovskij, 1924, 1925; Hoffmann, 1932; Mello-Leitão, 1934, 1945; Jaume, 1954; Bücherl, 1969, 1971; Aguilar & Meneses, 1970). Although subfamilies of BUTHIDAE are not well defined at this moment (see Sissom, 1990; Fet & Lowe, 2000), ISOMETRINAE Kraepelin, 1891 is among the oldest family-group names available in BUTHIDAE and will probably be used as a valid taxon name.

2. The crinoid subfamily name ISOMETRINAE Clark, 1917 (p. 6) (family ANTEDONIDAE) is based on the type genus *Isometra* Clark, 1908 (p. 133) (type species *Antedon challengerii* Clark, 1907 (p. 353), by original designation, currently *Isometra challengerii*). The name *Antedon challengerii* Clark, 1907 was published as a replacement name for *Antedon lineata* Carpenter, 1888 (p. 183, plate 13, figs. 4, 5), a junior homonym of *Antedon lineatus* Pomel, 1887 (currently *Palaeantedon lineatus*). The genus *Isometra*, though known chiefly from high southern latitudes and including only six species (two of which are known from single specimens), is one of the few crinoid genera that exhibit internal brooding, and includes the only living crinoid species in which skeletal modifications distinguish the sexes (e.g. John, 1938; Clark & Clark, 1967; Lawrence, 1987). As a result, members of the genus are among the few crinoid taxa in which early development has been investigated in any detail (Mortensen, 1920). As a result, the name ISOMETRINAE Clark, 1917 has been used regularly (always at subfamily rank) in taxonomic works on ANTEDONIDAE (e.g. Clark, 1918; Gislén, 1924; Clark & Clark, 1967; Rasmussen & Sieverts-Doreck, 1978). No synonyms exist in the family-group.

3. Under Article 55.3.1 the homonymy between ISOMETRINAE Kraepelin, 1891 (for scorpions) and ISOMETRINAE Clark, 1917 (for crinoids) must be referred to the Commission. In accordance with Recommendation 29A, we propose that the entire generic name *Isometra* should be adopted as the grammatical stem, so that the crinoid subfamily name will become ISOMETRAINAE and the homonymy will be removed. We are aware that this proposal may cause some problems for crinoid workers, but we can see no other resolution to the homonymy, short of ignoring Article 55.3.1 and accepting the homonymy. This, however, is likely to cause confusion during database searches.

4. The International Commission on Zoological Nomenclature is accordingly asked:
- (1) to use its plenary power to rule that for the purposes of Article 29 of the Code the stem of the generic name *Isometra* Clark, 1908 is ISOMETRA-;
 - (2) to place on the Official List of Generic Names in Zoology the following names:
 - (a) *Isometrus* Ehrenberg in Hemprich & Ehrenberg, 1828 (gender: masculine), type species by monotypy *Buthus (Isometrus) filum* Ehrenberg in Hemprich & Ehrenberg, 1828 (Scorpiones);
 - (b) *Isometra* Clark, 1908 (gender: feminine), type species by original designation *Antedon challengerii* Clark, 1907 (Crinoidea);
 - (3) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *maculatus* DeGeer, 1778, as published in the binomen *Scorpio maculatus* (senior synonym of *Buthus (Isometrus) filum* Ehrenberg in Hemprich & Ehrenberg, 1828, the specific name of the type species of *Isometrus* Ehrenberg in Hemprich & Ehrenberg, 1828) (Scorpiones);
 - (b) *challengerii* Clark, 1907, as published in the binomen *Antedon challengerii* (specific name of the type species of *Isometra* Clark, 1908) (Crinoidea);
 - (4) to place on the Official List of Family-Group Names in Zoology the following names:
 - (a) ISOMETRINAE Kraepelin, 1891, type genus *Isometrus* Ehrenberg in Hemprich & Ehrenberg, 1828 (Scorpiones);
 - (b) ISOMETRAINAE Clark, 1917, type genus *Isometra* Clark, 1908 (spelling emended by the ruling in (1) above) (Crinoidea);

- (5) to place on the Official List of Rejected and Invalid Family-Group Names in Zoology the name ISOMETRINAE Clark, 1917 (an incorrect original spelling of ISOMETRAINAE, as ruled in (1) above) (Crinoidea).

References

- Aguilar, F.P.G. & Meneses, G.O. 1970. Escorpiones y escorpionismo en el Perú. I. Nota preliminar sobre los Scorpionida peruanos. *Anales Científicos de la Universidad Nacional Agraria*, **8**(1–2): 1–5.
- Amoreux, P.-J. 1789. *Notice des insectes de la France, réputés venimeux*. 302 pp. Rue et Hôtel Serpente, Paris.
- Armas, L.F. de. 1976. Notas sobre distribución geográfica de *Isometrus maculatus* (De Geer) (Scorpionida: Buthidae) en las Antillas. *Miscelánea Zoológica*, **5**: 3–4.
- Birula, A.A. (Byalynitskii-Birulya, A.A.) 1917. *Faune de la Russie et des pays limitrophes fondée principalement sur les collections du Musée Zoologique de l'Académie des Sciences de Russie. Arachnides (Arachnoidea)*, vol. 1, pt. 1. xx, 227 pp. Petrograd. [In Russian]. English translation: Byalynitskii-Birulya, A.A. 1965. *Fauna of Russia and Adjacent Countries. Arachnoidea*, vol. 1. *Scorpions*. xix, 154 pp. Israel Program for Scientific Translations, Jerusalem.
- Bücherl, W. 1969. Giftige Arthropoden. Pp. 764–793 in Fittkau, E.J. et al. (Eds.), *Biogeography and Ecology in South America (Monographiae Biologicae 19)*, vol. 2. Junk, Dordrecht.
- Bücherl, W. 1971. Classification, biology and venom extraction of scorpions. Pp. 317–348 in Bücherl, W. & Buckley, E. (Eds.), *Venomous Animals and their Venoms*, vol. 3. Academic Press, New York.
- Carpenter, P.H. 1888. Report upon the Crinoidea collected during the Voyage of *H.M.S. Challenger* during the Years 1873–76, pt. 2. The Comatulæ. *Report on the Scientific Results of the Voyage of H.M.S. Challenger, Zoology*, vol. 26. x, 402 pp., pls. 1–70.
- Clark, A.H. 1907. New genera of recent free crinoids. *Smithsonian Miscellaneous Collections*, **50**(3): 343–364.
- Clark, A.H. 1908. New genera of unstalked crinoids. *Proceedings of the Biological Society of Washington*, **21**: 125–136.
- Clark, A.H. 1917. A revision of the crinoid family Antedonidae, with the diagnoses of nine new genera. *Journal of the Washington Academy of Sciences*, **7**(5): 127–131.
- Clark, A.H. 1918. The unstalked crinoids of the Siboga Expedition. *Siboga Expeditie*, **42b**: x, 328 pp, 28 pls.
- Clark, A.H. & Clark, A.M. 1967. A monograph of the existing crinoids, **1**(5). *Bulletin of the United States National Museum*, **82**: 1–860.
- DeGeer, C. 1778. *Mémoires pour servir à l'histoire des insectes*, **7**. 950 pp. Imprimerie Pierre Hesselberg, Stockholm.
- Fet, V. & Lowe, G. 2000. Family Buthidae. Pp. 54–286 in Fet, V., Sissom, W.D., Lowe, G. & Braunwalder, M.E. *Catalog of the Scorpions of the World (1758–1998)*. 690 pp. New York Entomological Society.
- Gislén, T. 1924. Echinoderm studies. *Zoologiska Bidrag fran Uppsala*, **9**: 1–316.
- Gysin, J. & Le Corroller, Y. 1968. Contribution à l'étude systématique du Scorpion '*Isometrus maculatus*' (de Geer, 1778). *Archives de l'Institut Pasteur d'Algérie*, **46**: 64–75.
- Hemprich, F.W. & Ehrenberg, C.G. 1828. *Zoologica II. Arachnoidea*. plate I: *Buthus*; plate II: *Androctonus* in: *Symbolae physicae seu icones et descriptiones animalium evertibratorum sepositis quae ex itinere per Africam borealem et Asiam occidentalem . . .* (plates only). Venditur a Mittlero, Berolini ex Officina Academica.
- Hoffmann, C.C. 1932. Monografías para la entomología médica de México. Monografía Num. 2, Los escorpiones de México. Segunda parte: Buthidae. *Anales del Instituto de Biología Universidad Nacional Autónoma de México*, **3**(3): 243–282; **3**(4): 283–361.
- Jaume, M.L. 1954. Catálogo de la fauna cubana. IV. Catálogo de los Scorpionida de Cuba. *Circulares del Museo y Biblioteca de Zoología de La Habana*, **1954**: 1035–1092.
- John, D.D. 1938. Crinoidea. *Discovery Reports*, **18**: 121–222.

- Kovařík, F.** 1994. *Isometrus zideki* sp.n. from Malaysia and Indonesia, and a taxonomic position of *Isometrus formosus*, *I. thurstoni* and *I. sankariensis* (Arachnida: Scorpionida: Buthidae). *Acta Societatis Zoologicae Bohemicae*, **58**: 195–203.
- Kovařík, F.** 1998. *Isometrus (Reddyanus) krasenskyi* sp.n. from Indonesia and *I. (R.) navaiae* sp.n. from the Philippines (Scorpiones, Buthidae). *Acta Societatis Zoologicae Bohemicae*, **62**: 35–40.
- Kraepelin, K.** 1891. Revision der Skorpione. I. Die Familie der Androctonidae. *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten*, **8**: 1–144.
- Lawrence, J.M.** 1987. *A Functional Biology of Echinoderms*. xii, 340 pp. Johns Hopkins University Press, Baltimore.
- Leach, W.E.** 1815. A tabular view of the external characters of four classes of animals, which Linné arranged under Insecta; with the distribution of the genera composing three of these classes into orders, etc. and descriptions of several new genera and species. *Transactions of the Linnean Society of London*, **11**(2): 306–400.
- Mello-Leitão, C. de.** 1934. Estudo monográfico dos Escorpiões da Republica Argentina. *Octava Reunion de la Sociedad Argentina Santiago del Estero, 1933*. 97 pp.
- Mello-Leitão, C. de.** 1945. Escorpiões sul-americanos. *Arquivos do Museu Nacional*, **40**: 7–468.
- Mortensen, T.** 1920. Studies in the development of crinoids. *Papers from the Department of Marine Biology, Carnegie Institution of Washington*, **16**: 1–94.
- Pavlovskij, E.N.** 1924. On the morphology of the male genital apparatus in scorpions. *Trudy Leningradskogo Obshchestva Yestestvoispytatelei* [*Transactions of the Leningrad Society of Naturalists*], **53**(2): 17–86.
- Pavlovskij, E.** 1925. Zur Morphologie des weiblichen Genitalapparats und zur Embryologie der Skorpione. *Annuaire du Musée Zoologique de l'Académie des Sciences d'URSS*, **26**: 137–205.
- Pomel, N.A.** 1887. *Paléontologie ou Description des Animaux Fossiles de l'Algérie*. Zoophytes, vol 2, pt. 2. 344 pp. Fontana, Alger.
- Rasmussen, H.W. & Sieverts-Doreck, H.** 1978. Articulata. Classification. Pp. T813–T928 in Moore, R.C. & Teichert, C. (Eds.), *Treatise on Invertebrate Paleontology*, Part T. Echinodermata 2(3). Geological Society of America, Boulder, Colorado.
- Sissom, W.D.** 1990. Chapter 3. Systematics, biogeography and paleontology. Pp. 64–160 in Polis, G.A. (Ed.), *Biology of Scorpions*. 587 pp. Stanford University Press, California.
- Thorell, T.** 1876. On the classification of scorpions. *Annals and Magazine of Natural History*, **4**(17): 1–15.
- Vachon, M.** 1972. Remarques sur les Scorpions appartenant au genre *Isometrus* H. et E. (Buthidae) à propos de l'espèce *Isometrus maculatus* (Geer) habitant l'île de Paques. *Cahiers du Pacifique*, **16**: 169–180.

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