Case 3470

Halectinosoma Vervoort, 1962 (Crustacea, Copepoda, Harpacticoida): proposed conservation of usage by designation of *Ectinosoma chrystalii* Scott, 1894 as the type species and by giving it precedence over *Pararenosetella* Lang, 1944

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Abstract. The purpose of this application, under Articles 23.9.3 and 81.2.3 of the Code, is to conserve the widespread usage of the name *Halectinosoma* Vervoort, 1962 for a common genus of primarily marine harpacticoid copepods in the family ECTINOSOMATIDAE. The name *Halectinosoma* is threatened by the senior subjective synonym *Pararenosetella* Lang, 1944 (type species *Ectinosoma erythrops* Scott & Scott, 1896). In the interest of stability and universality it is proposed to set aside all previous type fixations for *Halectinosoma* Vervoort, 1962 and designate *Ectinosoma chrystalii* Scott, 1894 as the type species. The originally designated type species is *Ectinosoma sarsii* Boeck, 1873, but this species is now considered as being incertae sedis in the family ECTINOSOMATIDAE and its generic affinity is uncertain. It is also proposed that *Halectinosoma* Vervoort, 1962 be given precedence over *Pararenosetella* Lang, 1944 whenever the two names are considered to be synonyms.

Keywords. Nomenclature; taxonomy; Copepoda; Harpacticoida; ECTINOSOMATIDAE; *Halectinosoma*; *Pararenosetella*; *Pararenosetella erythrops*; *Halectinosoma chrystalii*; harpacticoid copepods; cosmopolitan.

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1. In a paper completely lacking in illustrations, Boeck (1865, p. 254) proposed the harpacticoid copepod genus *Ectinosoma* (family ECTINOSOMATIDAE), to which he assigned a single, new species, *Ectinosoma melaniceps* Boeck, 1865 (p. 254). Lang (1944, p. 6) divided the genus *Ectinosoma* Boeck, 1865 into the nominotypical subgenus *Ectinosoma* (type species *Ectinosoma melaniceps* Boeck, 1865 by monotypy) and a newly proposed subgenus *Halectinosoma*, to which he assigned two species, *Ectinosoma sarsii* Boeck, 1873 and *Ectinosoma curticorne* Boeck, 1873, without designating either as the type species. Although Lang (1944) designated a type species for each of the two groups of species within the subgenus *Halectinosoma*, *Ectinosoma sarsii* Boeck, 1873 for the *sarsii*-group and *Ectinosoma curticorne* Boeck, 1873 for the *curticorne*-group, the name *Halectinosoma* was not made available by that publication, as no type species for this subgenus was fixed (Article 13.3 of the Code). This status of the name *Halectinosoma* continued in Lang's (1948, p. 194) '*Monographie der Harpacticiden*' where he added another 12 species to the *sarsii*-group and six species to the *curticorne*-group. To the former group of species he referred *Ectinosoma sarsii* Boeck, 1873; *Tachidius abrau* Kričagin, 1878; *Ectinosoma chrystalii* Scott,

1894; *E. propinquum* Scott & Scott, 1896; *E. herdmani* Scott & Scott, 1896; *E. armiferum* Scott & Scott, 1896; *E. finmarchicum* Scott, 1903; *E. neglectum* Sars, 1904; *E. elongatum* Sars, 1904; *E. brunnea* Brady, 1905; *E. proximum* Sars, 1919; *E. angulifrons* Sars, 1919; and *E. tenerum* Sars, 1920. As was pointed out by Karanovic & Pesce (2001, p. 282), Vervoort (1962, p. 399) explicitly designated *Ectinosoma sarsii* Boeck, 1873 as the type species of the subgenus *Halectinosoma*, but Lang (1965, p. 11), in raising *Halectinosoma* to generic status, did not mention Vervoort's (1962) designation (although the publication was cited in the reference list). A comparison of the diagnoses of the two subgenera given in Lang (1944, p. 6) shows that *Halectinosoma* is distinguished from *Ectinosoma* on the basis of the setation of the exopod of leg 5. Therefore, *Halectinosoma* is available from Vervoort's (1962) publication, which cites that page in Lang (1944) in this connection and designates a type species, and it takes the authorship *Halectinosoma* Vervoort, 1962, (Articles 13.1.1 and 13.3 of the Code).

2. Boeck's (1873, p. 45) original description of '*Ectinosoma Sarsii*' is very concise and lacks information on the morphology of the cephalosomic appendages, which is essential to distinguish the very closely related genera *Halectinosoma* and *Pseudobradya* Sars, 1904 (Huys et al., 1996, p. 170). In their reappraisal of *Halectinosoma sarsii* (Boeck, 1873) and related species, Clément & Moore (1995, p. 256) claimed it was uncertain whether *H. sarsii* belonged to *Halectinosoma* and consequently they placed it as a species incertae sedis in this genus. According to Scott & Scott (1896, p. 427), *Ectinosoma spinipes* Brady (1880, pp. 9–10, Plate XXXVI, figs. 1–10) is a junior subjective synonym of *Ectinosoma sarsii*, but as with many other earlier misidentifications of *H. sarsii*, this synonymy is probably incorrect (Clément & Moore, 1995). Most workers have adopted Sars's (1904, p. 30, Plate XVI) redescription of *Ectinosoma sarsii* as the standard of reference for correct identification, but Clément & Moore (1995) showed there were major discrepancies between Sars's material and the original description given by Boeck (1873). They consequently renamed Sars's species *Halectinosoma pseudosarsi* Clément & Moore, 1995. There are no verifiable published records of *Ectinosoma sarsii* as Boeck's (1873) type material apparently no longer exists. Jonas Axel Boeck was a Norwegian contemporary of Georg Ossian Sars, but it is probable that Sars did not see Boeck's material when he redescribed *Ectinosoma sarsii* 31 years after Boeck's untimely death in 1873. The type material of *E. sarsii* is not in the collections of the Zoologisk Museum in Oslo, and there are no records of it ever having been deposited there, or elsewhere in Norway.

3. As *Ectinosoma sarsii* Boeck, 1873 cannot be positively identified and therefore cannot adequately represent the genus *Halectinosoma* Vervoort, 1962, another species should be designated as the type species of *Halectinosoma*, as this designation will best serve stability and universality. Dussart & Defaye (1990, p. 11) cited (but not explicitly fixed) *Tachidius abrau* Kričagin, 1878 as the type species but, being one of the very few freshwater species of the genus *Halectinosoma*, it is not representative. Based on the latest checklist (Wells, 2007) and revision (Clément & Moore, 2007), the genus currently includes 67 valid species, of which all but four (*H. abrau*; *H. concinnum* (Akatova, 1935); *H. japonicum* (Miura, 1964); *H. uniarticulatum* Borutzky, 1972), are exclusively found in marine sediments. *Ectinosoma chrystalii* Scott, 1894 (p. 492) (currently *Halectinosoma chrystalii*) is here proposed as a new type species for the genus *Halectinosoma* Vervoort, 1962. *Ectinosoma chrystalii* was originally

described from the Gulf of Guinea (Scott, 1894, p. 492) but has since been recorded from the United Kingdom, Norway, Sweden and Nova Scotia (Clément & Moore, 1995, p. 264). The species was well known to Karl Lang who originally included it in his *sarsii*-group (Lang, 1948, p. 208). Both sexes of *Halectinosoma chrystalii* were adequately redescribed and illustrated by Clément & Moore (1995, pp. 264–269, figs 6–8), who pointed out that the type material was still extant (syntypes deposited in the Natural History Museum, London; reg. nos. 93.4.22.224–227) and that *Ectinosoma propinquum* Scott & Scott (1896, pp. 428–429, Plate 36 (figs 19, 27, 46), Plate 37 (figs 2, 15, 32, 55), Plate 38 (figs 9, 23, 34, 54)) was a junior subjective synonym of *E. chrystalii* Scott, 1894. It should be noted that the specific name has consistently been cited under the spelling '*chrystalli*' (e.g. Lang, 1948, 1965; Clément & Moore, 1995; Wells, 2007); it is clear from Scott's (1894) description ('The species is named after Professor Chrystal, …') that the correct original spelling is '*chrystalii*' and that under Article 33.3 of the Code '*chrystalli*' is to be considered an incorrect subsequent spelling. The use of the genitive ending *-i* in a subsequent spelling of a species-group name that is a genitive based upon a personal name in which the correct original spelling ends with *-ii* is deemed to be an incorrect subsequent spelling, even if the change in spelling is deliberate (Article 33.4 of the Code). Since Scott (1894) described the species as '*Ectinosoma Chrystalii*' the subsequent spelling '*chrystalli*' is incorrect. *Halectinosoma chrystalii* belongs to a complex of 18 morphologically very similar species (Clément & Moore, 1995) that is central to the generic concept of *Halectinosoma* and largely coincides with Lang's (1948) composition of the *sarsii*-group. Recent studies (e.g. Huys & Bodin, 1997; Karanovic & Pesce, 2001) have shown that several species of *Halectinosoma* should be placed in other genera and that the genus requires thorough revision. In the light of such revisionary work, designation of *Halectinosoma chrystalii* as type species would ensure that most currently included species remain in *Halectinosoma*, thus providing maximum stability to the taxonomy of the genus *Halectinosoma* and the family ECTINOSOMATIDAE, and requiring the lowest number of potential new combinations. Designation of *Halectinosoma pseudosarsi* Clément & Moore, 1995 (= *Ectinosoma sarsii* Boeck, 1873 sensu Sars, 1904) as the type species for the genus *Halectinosoma* is considered less favourable because a detailed description of the male is not available.

4. Lang (1944, p. 6) established the ectinosomatid genus *Pararenosetella* with a single originally included species, *Ectinosoma erythrops* Brady, 1880. A further four species were included in the genus by Lang (1948, p. 255): *Ectinosoma gracile* Scott & Scott, 1896; *Ectinosoma longicorne* Scott & Scott, 1896; *Ectinosoma tenuireme* Scott & Scott, 1896; and *Ectinosoma leptoderma* Klie, 1929. Chappuis (1954, p. 38) described *Pararenosetella meridionalis*, while Noodt (1955, pp. 87–89) added the new species *Pararenosetella psammae* Noodt, 1955 and transferred *Ectinosoma oblongum* Kunz, 1949 to *Pararenosetella*. In two subsequent papers, Noodt (1958, p. 58; 1964, p. 131) raised the number of species to ten by adding *Pararenosetella litoralis* Noodt, 1958 and *P. ghardaqensis* Noodt, 1964. Lang (1965, p. 10) did not accept the genus, claiming there were two distinct, not closely related lineages of species in *Pararenosetella*, and reallocated the species to three previously described genera. *Ectinosoma erythrops*, *E. gracile*, *E. longicorne*, *E. tenuireme* and *E. oblongum* were transferred to *Halectinosoma*, *P. litoralis* to *Ectinosoma* and *P. meridionalis*, *P. psammae* and *E.*

leptoderma to *Hastigerella* Nicholls, 1935. Lang (1965) initially overlooked Noodt's (1964) description of *P. ghardaqensis* but subsequently allocated it to the genus *Ectinosoma* in a postscript to his monograph (Lang, 1965, p. 547). Wells, 1965 (p. 34) designated the species figured as *Pararenosetella* sp. (?) by Wells (1963, p. 13, fig. 2A–B) as the type species of *Lineosoma* Wells, 1965 (p. 33). Despite Lang's (1965) rejection of the genus, two more species were added to *Pararenosetella*, *P. monniotae* Guille & Soyer, 1966 (p. 348) and *P. clavata* Rao & Ganapati, 1969 (p. 4). These two species were formally placed in the genus *Hastigerella* by Bodin (1967, p. 13) and Bodin (1976, p. 8), respectively. Since the type species, *Ectinosoma erythrops* Brady, 1880, is currently included in *Halectinosoma*, the generic name *Pararenosetella* Lang, 1944 is a senior subjective synonym of *Halectinosoma* Vervoort, 1962. Adopting this older name would however cause instability as it would upset the long-accepted name *Halectinosoma* in its accustomed meaning and result in many new combinations and undue confusion in the nomenclature and taxonomy of the ECTINOSOMATIDAE in general, and of its most speciose genus in particular. A list of 87 selected papers published by 64 different authors during the last 30 years, demonstrating the wide usage of the generic name *Halectinosoma*, is held by the Commission Secretariat. The generic name *Pararenosetella* has not been used as a valid name since Rao & Ganapati (1969).

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power:
  (a) to set aside all previous fixations of type species for the nominal genus *Halectinosoma* Vervoort, 1962 and to designate *Ectinosoma chrystalii* Scott, 1894 as the type species;
  (b) to give the generic name *Halectinosoma* Vervoort, 1962 precedence over the name *Pararenosetella* Lang, 1944, whenever they are considered to be synonyms;

(2) to place on the Official List of Generic Names in Zoology the following names:
  (a) *Halectinosoma* Vervoort, 1962 (gender: neuter), type species by subsequent designation *Ectinosoma chrystalii* Scott, 1894, as ruled in (1)(a) above, with the endorsement that it is to be given precedence over the name *Pararenosetella* Lang, 1944 whenever the two names are considered to be synonyms;
  (b) *Pararenosetella* Lang, 1944 (gender: feminine), type species by original designation *Ectinosoma erythrops* Brady, 1880, with the endorsement that it is not to be given precedence over the name *Halectinosoma* Vervoort, 1962 whenever the two names are considered to be synonyms;

(3) to place on the Official List of Specific Names in Zoology the following names:
  (a) *chrystalii* Scott, 1894 as published in the binomen *Ectinosoma chrystalii* (the specific name of the type species of *Halectinosoma* Vervoort, 1962, as ruled in (1)(a) above);
  (b) *erythrops* Brady, 1880, as published in the binomen *Ectinosoma eythrops* (the specific name of the type species of *Pararenosetella* Lang, 1944).

References

Akatova, N. 1935. Drei neue Copepoden-Arten aus dem Kaspi See. *Zoologischer Anzeiger*, **111**(11–12): 319–326.

Bodin, P. 1967. Catalogue des nouveaux Copépodes Harpacticoïdes marins. *Mémoires du Muséum National d'Histoire Naturelle, Paris, Nouvelle série*, (A)**50**(1): 1–76.

Bodin, P. 1976. *Catalogue des nouveaux Copépodes Harpacticoïdes marins. Additif no. 3*. 45 pp. Laboratoire d'Océanographie Biologique, Université de Bretagne occidentale, Brest.

Boeck, A. 1865. Oversigt over de ved Norges Kyster jagttagne Copepoder henhörende til Calanidernes, Cyclopidernes og Harpactidernes Familier. *Forhandlinger i Videnskabsselskabet i Kristiania*, **1864**: 226–282.

Boeck, A. 1873. Nye Slaegter og Arter af Saltvands-Copepoder. *Forhandlinger i Videnskabsselskabet i Kristiania*, **1872**: 35–60.

Borutzky, E.V. 1972. Copepoda Harpacticoida gruntovykh vod poberezhya oz. Issyk-kul i yuzhnoi chasti Kyzylkumov. (Copepoda Harpacticoida from subterranean water of the shore of Issyk-kul and southern Kyzulkum). *In*: Fauna gruntovykh vod Srednei Azii. Pp. 98–119. *Akademiya Nauk SSSR. Leningrad* (*Trudy Zoologicheskogo Instituta*, vol. 51).

Brady, G.S. 1880. *A monograph of the free and semi-parasitic Copepoda of the British Islands*, vol. 2, 182 pp., pls. 34–82. Ray Society, London.

Brady, G.S. 1905. On Copepoda and other Crustacea taken off Northumberland and Durham in July, 1904. *Natural History Transactions of Northumberland, Durham and Newcastle-upon-Tyne*, n. ser. **1**: 210–223.

Chappuis, P.A. 1954. IV. Copépodes psammiques des plages du Roussillon. *In*: Chappuis, P.A. & Delamare Deboutteville, Cl. avec la collaboration de Balazuc, J. & Ruffo, S. Biospeologica LXXIV. Recherches sur les Crustacés souterrains (première série). *Archives de Zoologie Expérimentale et Générale*, **91**: 35–50.

Clément, M. & Moore, C.G. 1995. A revision of the genus *Halectinosoma* (Harpacticoida: Ectinosomatidae): a reappraisal of *H. sarsi* (Boeck) and related species. *Zoological Journal of the Linnean Society*, **114**: 247–306.

Clément, M. & Moore, C.G. 2007. Towards a revision of the genus *Halectinosoma* (Copepoda, Harpacticoida, Ectinosomatidae): new species from the North Atlantic and Arctic regions. *Zoological Journal of the Linnean Society*, **149**: 453–475.

Dussart, B.H. & Defaye, D. 1990. Répertoire mondial des Crustacés Copépodes des eaux intérieures. III. Harpacticoïdes. *Crustaceana*, **suppl. 16**: i–vii, 1–384 (incl. index).

Guille, A. & Soyer, J. 1966. Copépodes Harpacticoïdes de Banyuls-sur-Mer. 4. Quelques formes de gravelles à *Amphioxus*. *Vie et Milieu*, (B)**17**: 345–387.

Huys, R. & Bodin, P. 1997. First record of Acanthocephala in marine copepods. *Ophelia*, **46**(3): 217–231.

Huys, R., Gee, J.M., Moore, C.G. & Hamond, R. 1996. *Marine and Brackish Water Harpacticoid Copepods. Part 1*, *in* Barnes, R.S.K. & Crothers, J.H. (Eds.), Synopses of the British Fauna (New Series), 51, i–viii, 1–352. Field Studies Council, Shrewsbury.

Karanovic, T. & Pesce, G.L. 2001. A new genus and species of the family Ectinosomatidae (Crustacea: Copepoda: Harpacticoida) from the groundwaters of India. *Annales de Limnologie*, **37**(4): 281–292.

Klie, W. 1929. Die Copepoda Harpacticoida der südlichen und westlichen Ostsee mit besonderer Berücksichtigung der Sandfauna der Kieler Bucht. *Zoologische Jahrbücher: International journal for zoological sciences. Abteilung für Systematik Ökologie und Geographie der Tiere*, **57**(3–4): 329–386.

Kričagin, N. 1878. Otchet' ob' ekskursii na Sv. Bereg' Chernago morya sovershennoi po porucheniyu Kievskago obshchestva estestvois'pytatelei letom' 1874 g. (Report on an excursion to the northeastern shore of the Black Sea carried out in the summer of 1874 on the instructions of the Kiev Society of Naturalists). *Zapiski Kievskago Obshchestva Estestvoispytatelei*, **5**(1): 1–56.

Kunz, H. 1949. Die sandbewohnenden Copepoden von Helgoland. II. *Kieler Meeresforschungen*, **6**: 51–58.

Lang, K. 1944. *Monographie der Harpacticiden (Vorläufige Mitteilung)*. 39 pp. Almqvist & Wiksells Boktryckeri, Uppsala.

Lang, K. 1948. *Monographie der Harpacticiden.* 1682 pp. (2 volumes). Håkan Ohlsson, Lund.

Lang, K. 1965. Copepoda Harpacticoida from the Californian Pacific coast. *Kungliga Svenska Vetenskapsakademiens Handlingar*, (4)**10**(2): 1–560.

Miura, Y. 1964. Subterranean harpacticoid copepods from a driven well in Japan. *Japanese Journal of Zoology*, **14**: 133–141.

Nicholls, A.G. 1935. Copepods from the interstitial fauna of a sandy beach. *Journal of the marine biological Association of the United Kingdom, New Series*, **20**: 379–405.

Noodt, W. 1955. Harpacticiden (Crust. Cop.) aus dem Sandstrand der französischen Biscaya-Küste. *Kieler Meeresforschungen*, **11**: 86–109.

Noodt, W. 1958. Die Copepoda Harpacticoidea des Brandungsstrandes von Teneriffa (Kanarische Inseln). *Abhandlungen der Mathematisch-naturwissenschaftlichen Klasse. Akademie der Wissenschaften und der Literatur in Mainz*, **1958**(2): 53–116.

Noodt, W. 1964. Copepoda Harpacticoidea aus dem Litoral des Roten Meeres. *Kieler Meeresforschungen*, **20**(Sonderheft): 128–154.

Rao, G.C. & Ganapati, P.N. 1969. Some new interstitial copepods from Waltair coast. *Proceedings of the Indian Academy of Sciences*, (B)**69**(1): 1–14.

Sars, G.O. 1904. Copepoda Harpacticoida. Parts III & IV. Ectinosomidae, Harpacticidae (part). *An account of the Crustacea of Norway, with short descriptions and figures of all the species*, **5**: 29–56, pls 17–32.

Sars, G.O. 1919. Copepoda supplement. Parts I & II. Calanoida, Harpacticoida (part). *In*: *An account of the Crustacea of Norway, with short descriptions and figures of all the species*, vol. 7. 24 pp, 1–16 pls. Kristiania (& Kjobenhavn).

Sars, G.O. 1920. Copepoda supplement. Parts III & IV. Harpacticoida (continued). *In*: *An account of the Crustacea of Norway, with short descriptions and figures of all the species*, vol. 7. Pp. 25–52, 17–32 pls. Kristiania (& Kjobenhavn).

Scott, T. 1894. Report on Entomostraca from the Gulf of Guinea, collected by John Rattray, B.Sc. *Transactions of the Linnean Society of London. Ser. 2. Zoology*, **6**: 1–161.

Scott, T. 1903. Notes on some Copepoda from the Arctic Seas collected in 1890 by the Rev. Canon A.M. Norman, F.R.S. *In*: Norman, A.M. Notes on the Natural History of East Finmark, I. *Annals and Magazine of natural History*, (7)**11**: 4–32.

Scott, T. & Scott, A. 1896. Revision of the British species belonging to the genera *Bradya*, Boeck, and *Ectinosoma*, Boeck. *Transactions of the Linnean Society of London Ser. 2. Zoology*, **6**(5): 419–446.

Vervoort, W. 1962. Report on some Copepoda collected during the Melanesia Expedition of the Osaka Museum of Natural History. *Publications of the Seto Marine Biological Laboratory*, **10**(2): 393–470.

Wells, J.B.J. 1963. Copepoda from the littoral region of the estuary of the River Exe (Devon, England). *Crustaceana*, **5**(1): 10–26.

Wells, J.B.J. 1965. Two new genera of harpacticoid copepods of the family Ectinosomidae. *Revista de Biologia*, Lisboa, **5**(2–3): 30–35.

Wells, J.B.J. 2007. An annotated checklist and keys to the species of Copepoda Harpacticoida (Crustacea). *Zootaxa*, **1568**: 1–872.

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