

New Lysianassoid Amphipods from the North Eastern Atlantic Ocean

R.A. KAIM-MALKA

Station Marine d'Endoume, Rue de la Batterie des Lions, 13007 Marseille, France. E-mail: richard.elkaim@orange.fr

Abstract

Two new lysianassoid amphipod species, *Ambasia anophthalma* n. sp. and *Bathyamaryllis biscayensis* n. sp., are described based on adult females collected in the North Eastern Atlantic Ocean (Bay of Biscay) by an autonomous bait system deployed on the sea bottom at a depth of 1460–1550 m. These two species are characterized by the absence of eyes (blind species). They belong to genera which include very few species.

Key words: Amphipoda, lysianassoid, *Ambasia*, *Bathyamaryllis*, bathyal, France, Atlantic Ocean, taxonomy, new species

Résumé

Deux espèces nouvelles d'amphipodes lysianassoides, *Ambasia anophthalma* n. sp. et *Bathyamaryllis biscayensis* n. sp., sont décrites à partir de femelles adultes récoltées en Atlantique (Golfe de Gascogne) au moyen d'un système autonome de piège appâté posé sur le fond à une profondeur de 1460m -1550m. Ces deux espèces sont aveugles. Elles appartiennent à des genres ne comprenant qu'un nombre réduit d'espèces.

Mots clé: Amphipoda, lysianassoides, *Ambasia*, *Bathyamaryllis*, bathyal, France, Océan Atlantique, systématique, nouvelles espèces

Introduction

During cruise VITAL, in 2002, of R/V "L'Atalante" (IFREMER) deep-sea fish communities were studied on the continental slope of the Bay of Biscay (North Eastern Atlantic Ocean) (Trenkel *et al.* 2002).

Among the amphipods species collected by the trap, three specimens belonging to the genus *Ambasia* Boeck, 1871 and four specimens belonging to the genus *Bathyamaryllis* Pirlot, 1933 were present. Their morphological characters were never observed in these genera, so these specimens are described as new species for the science.

The genus *Ambasia* Boeck, 1871 includes two valid species (with *Ambasia anophthalma* n. sp.), belonging to the superfamily of Lysianassoidea. These species are present in the East Atlantic and Arctic Ocean. They are distributed in shallow waters and bathyal depths (Barnard & Karaman 1991; this work).

The genus *Bathyamaryllis* Pirlot, 1933 includes six valid species belonging to the superfamily of Lysianassoidea: *B. haswelli* (Stebbing, 1888), *B. pulchellus* (Bonnier, 1896), *B. perezii* Pirlot, 1933, *B. ouvea* Lowry & Stoddart, 1994, *B. kapala* Lowry & Stoddart, 2002, and *B. biscayensis* n. sp.. These species are known from the Western and Eastern North Atlantic Ocean, Indonesia, Eastern Australia and Western South Pacific Ocean between 120–1919 m depth.

Material and methods

At the sites studied, "an autonomous lander equipped with a current metre, a temperature probe, a turbidity metre, an autonomous bait system (including a rotating bait dispenser) and a camera was deployed for three days" on the

from *Bathyamaryllis haswelli* (Stebbing, 1888), *Bathyamaryllis pulchellus* (Bonnier, 1896) and *Bathyamaryllis perezii* Pirlot, 1933, which have the lateral cephalic lobe quadrate-shaped and the anterior margin straight.

Key to species of *Bathyamaryllis*

1	Uropod 3: outer ramus 1-articulate	2
—	Uropod 3: outer ramus 2-articulate	5
2	Head anterior margin with only a notch or a concavity	3
—	Head anterior margin with a notch extended into a slit	4
3	Lateral cephalic lobe truncated; Antenna 1, first joint with a tooth	<i>Bathyamaryllis haswelli</i> (Stebbing, 1888).
—	Lateral cephalic lobe triangular; Antenna 1, first joint without tooth	<i>Bathyamaryllis biscayensis</i> n. sp.
4	Gnathopod 2 palm acute. Pereopod 4 coxa with anteroventral corner subquadrate	<i>Bathyamaryllis pulchellus</i> (Bonnier, 1896).
—	Gnathopod 2 palm transverse. Pereopod 4 coxa with anteroventral corner rounded	<i>Bathyamaryllis perezii</i> Pirlot, 1933.
5	Pereopod 4 coxa with anterior margin slightly curved	<i>Bathyamaryllis kapala</i> Lowry & Stoddart, 2002.
—	Pereopod 4 coxa with anterior margin straight	<i>Bathyamaryllis ouvea</i> Lowry & Stoddart, 1994.

Acknowledgments

The author wishes to thank Dr H. Zibrowius who kindly provided me with the amphipod collection and for his information about the sampling area, Dr D. Bellan-Santini, Dr N. Kilgallen, Dr J.K. Lowry, for their kindly constructive discussions, remarks and revision of the manuscript.

References

- Barnard, J.L. (1969) The families and genera of marine gammaridean Amphipoda. *United States National Museum Bulletin*, 271, 1–535, figs. 1–173.
- Barnard, J.L. & Karaman, G.S. (1991) The families and genera of marine Gammaridean Amphipoda (except marine Gammaroid). *Records of the Australian Museum*, Supplement 13 (2), 419–866.
<http://dx.doi.org/10.3853/j.0812-7387.13.1991.367>
- Barnard, K.H. (1940) Contributions to the crustacean fauna of South Africa. 12. Further additions to the Tanaidacea, Isopoda, and Amphipoda, together with keys for the identification of the hitherto recorded marine and fresh-water species. *Annals of the South African Museum*, 32, 381–543.
- Boeck, A. (1871) Crustacea Amphipoda Borealia et Arctica. *Forhandlinger i Videnskabs -Selskabet i Christiania* 1870, 83–280.
<http://dx.doi.org/10.5962/bhl.title.2056>
- Bonnier, J. (1896) Résultats Scientifiques de la Campagne du "Caudan" dans le Golfe de Gascogne— Août-Septembre 1895. Edriophthalmes. *Annales de l'Université de Lyon*, 26, 624–626, 724–725, pl. 36.
- Chevreux, E. (1908) Diagnose d'amphipodes nouveaux provenant des campagnes de la Princesse Alice dans l'Atlantique nord. *Bulletin de l'Institut Océanographique, Monaco*, 117, 1–3.
- Dana, J.D. (1849) Synopsis of the genera of Gammaracea. *American Journal of Sciences and Arts*, Series 2, 8, 135–140.
- Edwards, H.M. (1830) Extrait de recherches pour servir à l'histoire naturelle des crustacés amphipodes. *Annales des Sciences Naturelles*, 20, 353–399, 10 pls.
- Lincoln, R.J. (1979) *British Marine Amphipoda: Gammaridea*.— London: British Museum (Natural History), 658 pp.
- Lowry, J.K. & Stoddart, H.E. (1994) Crustacea-Amphipoda: Lysianassoids from the tropical western South Pacific Ocean. In *Résultat des Campagnes MUSORSTOM*, ed. A. Crosnier, volume 12. *Mémoires du Muséum National d'Histoire Naturelle, Paris*, 161, 139–144, figs. 7–10.
- Lowry, J.K. & Stoddart, H.E. (2002) The Amaryllididae of Australia (Crustacea: Amphipoda: Lysianassoidea). *Records of the Australian Museum*, 54, 129–214.
<http://dx.doi.org/10.3853/j.0067-1975.54.2002.1363>
- Pirlot, J.M. (1933) Les Amphipodes de l'expédition du Siboga. Deuxième partie: Les amphipodes gammarides, II:— Les amphipodes de la mer profonde. I (Lysianassidae, Stegocephalidae, Stenothoidae, Pleustidae, Lepechinellidae). *Siboga-Expedition, Monograph*, 33c, 123–127.
- Stebbing, T.R.R. (1888) Report on the Amphipoda collected by H.M.S. Challenger during the years 1873–1876. *Report on the Scientific Results of the Voyage of H.M.S. Challenger during the years 1873–76, Zoology*, 29, 703–706, pl. 28.
- Stebbing, T.R.R. (1906) Amphipoda I. Gammaridea. *Das Tierreich*, 21, 1–806.

- Trenkel, V.M., Bailly, N., Berthelé, O., Brosseau, O., Causse, R., Corbière, F. de, Dugornay, O., Ferrant, A., Gordon, J.D.M., Latrouite, D., Le Piver, D., Kergoat, B., Lorance, P., Mahévas, S., Mesnil, B., Poulard, J.C., Rochet, M.J., Tracey, D., Vacherot, J.P., Veron, G. & Zibrowius, H. (2002) First results of a quantitative study of deep-sea fish on the continental slope of the Bay of Biscay: visual observations and trawling. *ICES CM 2001 / L*, 18, 1–15. [International council for the Exploration of the Sea]
- Trenkel, V.M. & Lorance, P. (2011) Estimating *Synaphobranchus kaupii* densities: Contribution of fish behaviour to difference between bait experiments and visual strip transects. *Deep-Sea Research I*, 58, 63–71.
<http://dx.doi.org/10.1016/j.dsr.2010.11.006>
- Trenkel, V. M., Lorance, P. & Mahévas, S. (2004) Do visual transects provide true population density estimates for deepwater fish? *ICES Journal of Marine Science*, 61, 1050–1056.
<http://dx.doi.org/10.1016/j.icesjms.2004.06.002>