

A RARE STALK-EYED SQUID (*BATHOTHAUMA LYROMMA* CHUN) NEW TO AUSTRALIAN WATERS.

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(Figures 1-7.)

A very rare cephalopod has been found recently in Australian waters. It was collected in a surface net of the Fisheries Investigation vessel "Warreen" from St.62/38 (Tasmania), N. 200 horizontal; and, with the permission of Dr. H. Thompson, Officer in Charge, Fisheries Section, Council for Scientific and Industrial Research, I am now able to record it for the first time from Australia. I wish to express my thanks to Dr. Thompson for the opportunity to examine this rare cephalopod.

Only on four previous occasions has this species, *Bathothauma lyromma* Chun, been recorded. The genus *Bathothauma* was created by Chun¹ for a single specimen caught in 3,000 m., west of Cape Verde in the Guinea Stream by the "Valdivia" Expedition in 1903; but only a brief description of the characters is given in a general account of a pelagic family of squids, the Cranchiidae, in which he placed it. Robson,² when describing a model of this species in the British Museum, remarked that up till 1930 only two specimens of this very rare cephalopod were known: the "Valdivia" one from the Atlantic, and another obtained by the United States Fisheries Commission steamer "Albatross" in the eastern Pacific.

A third one, however, which Robson does not mention, is recorded by Joubin.³ This was caught during the 1910 voyage in 3,660 m., at St.3039 (Lat. 36° 05' 30" N.; Long. 9° 00' 30" W.), and though it was only a juvenile specimen, measuring but 10 mm. from the mouth to the posterior end (Chun's specimen measuring approximately 92 mm.), Joubin had no hesitation in considering it *Bathothauma lyromma*. He states that it does not differ from Chun's figures, and substantiates this by a figure (pl. xiv, fig. 4) of his specimen. Thiele⁴ points out that another juvenile species for which Joubin in the same work created a new genus and species, *Fusocranchia alpha*, should belong, in his opinion, to the genus *Bathothauma*; but Joubin's figures of the preserved specimen (pl. xiv, figs. 5-9) do not seem to me to show the characters sufficiently to substantiate Thiele's statement.

The fourth specimen of *Bathothauma lyromma* was collected by Dr. William Beebe at Nonsuch Island, Bermuda. Though an excellent photograph of it appeared in the Bulletin, New York Zoological Society, Vol. xxxiii, No. 2, 1930, p. 76, no facts were given. It appears, then, that only these four specimens were known until the "Warreen" had the good fortune to collect a specimen in Australian waters.

¹ Chun.—Zool. Anz., xxxi, 1907, p. 86.

² Robson.—Nat. Hist. Mag. (B.M.), ii, No. 16, 1930, pp. 257-9.

³ Joubin.—Res. Camp. Sci. Monaco, liv, 1920, p. 72, pl. xiv, fig. 4.

⁴ Thiele.—Handb. der Syst. Weicht., 1931, p. 933.

Though Chun in the original description of his new genus and species gives no figures of his specimen, he provides excellent ones in his "Valdivia" report,⁵ and further elaborates the characters of the family Cranchiidae, leaving little doubt as to the identification of the Australian specimen. It should be mentioned here that Chun refers in his text (p. 389) to a photograph of the "Albatross" specimen sent to him by Hoyle, who incidentally had described its eyes and luminous organ,⁶ and that this interested him as it showed that the eye-stalks of his (Chun's) specimen were not normal. To illustrate this, Chun figures the ventral surface of the Atlantic *Bathothauma lyromma* with its eye-stalks in their abnormal position (fig. 6), and the dorsal surface of the same specimen with the eye-stalks as shown normal in the photograph of the eastern Pacific "Albatross" one sent to him by Hoyle (fig. 7). Chun's explanation of the latter figure reads: "Fig. 7. Dasselbe Exemplar, Dorsalansicht. Nat. Grösse. Die Augienstiele sind unter Berücksichtigung ihres Verhaltens bei einem zweiten Exemplar gestreckt dargestellt."

In preparing this account of *Bathothauma lyromma*, I have thought it worth while to include copies of the illustrations of Chun's type specimen as well as illustrations of the Australian form.

Class CEPHALOPODA.
Subclass DIBRANCHIA.
Order DECAPODA.
Family CRANCHIIDAE.
Genus *Bathothauma* Chun, 1906.

Bathothauma Chun, Zool. Anz., xxxi, 1907, p. 86.

Haplotype.—*Bathothauma lyromma* Chun.

Characters of the Genus.—Fins widely spaced. Posterior end of body rounded. Eyes on large plump stalks. Body sac-like. Fins small, rounded, tapering towards the fin attachment. Posterior end of gladius (pen) shaped to a transverse clasp, which gradually expands laterally and with its shovel-shaped ends serves as a support to the fin-attachment. Eyes large, oval, running to a point on the ventral side above the large luminous organ. Eye-stalks long, broad, bent lyre-shaped. Head long and slender. Arms small, tentacles very large; tentacle stalks armed with numerous suckers in two rows along their entire length. Club slightly expanded, very long, keeled. Sac-like end section of the main stomach is turned up ventrally forwards. Pancreas compact, horseshoe-shaped, lying on both sides of the liver, which projects far into the respiratory cavity (Chun).

Bathothauma lyromma Chun.

Bathothauma lyromma Chun, Zool. Anz., xxxi, 1907, p. 86; Wiss. Ergeb. Deutsch Tiefsee-Exped., "Valdivia", xviii, Teil i, 1910, pp. 389-391, Taf. lvi, F. 9, Taf. lvii, F. 1, 2, Taf. lviii, F. 6, 7. *Id.*, Hoyle, 7th Intern. Zool. Cong., Boston, 1907, pp. 831-35 ("advance print" separately paged). *Id.*, Joubin, Res. Camp. Sci. Monaco, liv, 1920, p. 72, pl. xiv, f. 4. *Id.*, Robson, Nat. Hist. Mag. (B.M.), ii, No. 16, 1930, p. 259. *Id.*, Thiele, Handb. der Syst. Weicht., 1931, p. 982, F. 882.

⁵ Chun.—Wiss. Ergeb. Deutsch Tiefsee-Exped., "Valdivia", xviii, Teil i, 1910, pp. 1-400, Taf. lvi, F. 9; Taf. lvii, F. 1, 2; Taf. lviii, F. 6, 7.

⁶ Hoyle.—7th Intern. Zool. Cong., Boston, 1907, pp. 831-835 ("advance print" separately paged).