

PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON

A NOTE ON *LOLIGO COROLLIFLORA* TILESIIUS,  
1829, A LONG FORGOTTEN SQUID  
FROM EASTERN SEAS<sup>1</sup>

BY GILBERT L. VOSS

*Institute of Marine Science, University of Miami*

My colleague, Frederick M. Bayer, the well-known octo-corallian authority, has kindly drawn to my attention an old and obscure paper by W. G. Tilesius. It is entitled "Beiträge zur Naturgeschichte der Medusen. I. Cassiopeae" and was published in June 1829 in *Nova Acta Academiae Caesareae Leopoldino-Carolinae Germanicae naturae Curiosorum*. On pages 286 and 287 of this work is the description of a new species of squid from China, *Loligo corolliflora*, accompanied by excellent color illustrations (Plate LXXIII) of the whole animal, a view of the mouthfield and ventral and lateral views of the gladius. These are included on a plate illustrating the habit and anatomy of *Cassiopea canariensis*.

That omnivorous bibliophile and researcher, Sherborn, listed *L. corolliflora* in his *Index animalium* but apparently the name has evaded the eyes of teuthologists since its publication. D'Orbigny does not mention it in his great *Histoire Naturelle*, nor does Tryon include it in the first volume of the *Manual of Conchology*. A survey of cephalopod literature failed to turn up even a passing reference. While there is no question that *L. corolliflora* is validly described, it is questionable whether the species could be recognized today from the somewhat inadequate description and *au nature* illustrations. The whereabouts of the type is not mentioned but it is presumed to be preserved in one of the old German or

<sup>1</sup> Contribution No. 000 from The Marine Laboratory, Institute of Marine Science, University of Miami.



Russian museums. The entire question is, however, rather moot since even if its identity could be determined and priority established, it is beyond question a *nomen oblitum* and no service would be rendered to teuthology by reintroducing it.

Since the manner in which *L. corolliflora* is described is rather curious I give below a translation (mine) from the German of the description of *Cassiopea canariensis* containing it with the expectation that others will find it of interest. The original pagination is indicated and original German equivalents are placed in parentheses.

(Page 285) "In the same way that *Cassiopea frondosa* Palasii (Plate LXXII Figure 5) appears as it were double stalked owing to the 8 central branchlets of their 8 large bushy arms at the middle point of the stalk, so also *Cassiopea rhizostomoidea anglica* is distinguished by a similar small stalk in the middle point of the larger, because 4 shield shaped and 4 heart shaped leaves ("Cotyledonen") in the middle of the larger stalk are united to a smaller one; (page 286) thus the present species also shows a similar structure of 8 small arms in the middle—or points of union of the 8 large arms, and forms a second small stalk (Pl. LXXIII, Fig. 2, *pp*) in the middle of the larger one. It is further found that this double construction equally occurs in more species of the family and to some extent appears to take part in the structure of the family characters. A noteworthy parallel occurs in the 8 small arms of a Chinese squid (*Loligo corolliflora*, Pl. LXXIII, Fig. 5. *aaaa*) which are surrounded by the 8 large arms of this animal as also in *Loligo pealii* of Mr. Lesueur in which a similar construction of the double arms is found which I have already shown above in the statement of the family characters of this medusoid tribe. I have included *Loligo corolliflora* for comparison in figures 4, 5, 6 and 7 of Plate 73 in order to represent with this remarkable example a corresponding double construction. Figure 5 is truly characteristic since it presents the central mouth of the animal with its parrot beak (*c*), which is surrounded by the wrinkled circular lip and the 8 small pebbly arms *a a* and further toward the outside by the 8 large arms *b b* which are provided on the inner side with sucker tubercles by which they introduce prey to the beaks and can hold them fast, thus the squid, like all other cuttlefishes and octopods are radially surrounded; it is the chief plan in the evaluation of these animals and one must maintain it because of the well developed 8 arms which surround the central mouth the same as rays. The fourth figure represents the animal viewed laterally, *b* are the arms, *p* the (page 287) 2 catchers ("Fänger") with the sucker tubercles on their club shaped ends which serve them as



anchors in storms and surf. The animal can retract within his mantle ("Scheide") the entire head with the eyes, from which projects in front under the neck a squirter ("Sprütze") or reversed funnel through which the animal squirts its ink when it defends itself. The outer sheath-like covering, provided ventrally with 2 heartshaped fins, is supported on the back by a horny, thin, transparent support shaped like a feather which can be easily extracted. This part is illustrated in Figure 6 in side view, in Figure 7 from in front or from the inner surface."

The above paper is of interest in several ways, not the least of which is the evidence of the strong influence of Goethe's archetype philosophy upon Tilesius. The search for unifying principles of design here resulted in a concept of the organization of *Loligo* clearly unacceptable on the basis of sound anatomical research. The orientation of the animal as given by Tilesius was one favored by most cephalopod workers until comparatively recently and is unrelated to the functional orientation. He was wrong, however, in believing that *Loligo* can withdraw the head completely within the mantle cavity. Only *Cranchia scabra*, to the writer's knowledge, can accomplish this feat, although in *Loligo* the head is capable of considerable anterior-posterior movement.

Other features of Tilesius' observations correspond to the familiar anthropomorphic thinking of the period. It is true that the "catchers" or tentacles are used in the squids for seizing their prey but there is no evidence to support his further theory that they are used "as anchors in storms and surf." Whether he was familiar with the function of the funnel as a swimming organ is not known but it is unlikely since he ascribes to it only the functions of squirting ink.

Tilesius later published several other works better known to teuthologists and containing much worthwhile information.

It is useless at this time, and without access to the type upon which Tilesius' figures and description are based, to attempt to relate *Loligo corolliflora* to any presently recognized species. Although the name is a *nomen oblitum* in the true sense of the word, it would be interesting to know the species described. It is hoped that some European workers, having access to Tilesius' collections, may be spurred to locating the specimen and clarifying the interesting puzzle presented here.

#### LITERATURE CITED

- TILESIIUS, W. G. 1829. Beiträge zur Naturgeschichte der Medusen. I. Cassiopeae. Nova Acta Academiae Caesareae Leopoldino-Carolinae Germanicae naturae Curiosorum. 15(2): 249-288, pls. 69-73.



Voss, Gilbert L. 1965. "A note on *Loligo corolliflora* Tilesius, 1829, a long forgotten squid from eastern seas." *Proceedings of the Biological Society of Washington* 78, 155–157.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/107518>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/44245>

**Holding Institution**

Smithsonian Libraries and Archives

**Sponsored by**

Biodiversity Heritage Library

**Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Biological Society of Washington

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.