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Curculio tragiae F. – a baridine weevil collected by the Cook-Expedition in Brazil 1768

(Coleoptera: Curculionidae: Baridinae)

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Summary

The history and origin of the type material of *Curculio tragiae* F. are reconstructed based on information in the description and historical evidence. The species is placed in the Baridinae as *Nanobaris tragiae* (F.) **comb. n.**, where it takes priority over *N. setosella* (Hustache) **syn. n.** The original definition of *Nanobaris* Champion is modified to allow for the addition of species with elongate, spindle-shaped antennal club.

Zusammenfassung

Die Vergangenheit und Herkunft des Typenmaterials von *Curculio tragiae* F. werden auf der Grundlage von Informationen in der Beschreibung und historischen Indizien rekonstruiert. Die Art wird als *Nanobaris tragiae* (F.) **comb. n.** in die Baridinae versetzt, wo sie Priorität über *N. setosella* (Hustache) **syn. n.** erhält. Die ursprüngliche Definition von *Nanobaris* Champion wird abgewandelt, um den Einschluss von Arten mit langer, spindelförmiger Fühlerkeule zu ermöglichen.

Key words

weevils, historical explorations, James Cook, Joseph Banks, Brazil

Introduction

Miguel Alonso-Zarazaga recently recognized that the unplaced *Curculio tragiae* F. belongs in the Baridinae (personal comm.). Although being of impressive age and rather cruelly pinned (total length 2.8 mm!), both cotypes are preserved in surprisingly good condition. The reference to Banks in the description and the historical accounts available link the specimens to James Cook's first voyage, 1768–71. Here, I reconstruct the events that placed this weevil in the hands of Fabricius, and assign the species to a genus in Baridinae.

Per Tingbrand and Ivar Gustafsson, of the Swedish Solander Society, helped to clarify details of the relevant episode in Cook's voyage, by providing articles prepared by PT for the annual magazine of the Piteå yacht-club. Type material was located and/or made available for examination by Miguel Alonso-Zarazaga (Madrid), Max Barclay (London), Lee Herman jr. (New York), Klaus Klass (Dresden), Steven Lingafelter (Washington D.C.), Ole Martin (Copenhagen) and Hélène Perrin (Paris). Steve Cafferty (London) searched for *Tragia volubilis* in the Banks & Solander herbarium. Lawrence Kirkendall (Bergen) commented on the manuscript and made valuable suggestion which helped to improve the text.

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Historical events

KING GEORGE III consented in 1768 to send out a British expedition to the South Pacific. The official order was to observe the transit of Venus across the disc of the sun, on 3 June 1769. The admiralty entrusted this undertaking to the experienced and loyal sailor JAMES COOK, while rejecting the candidate of the Royal Society, the civil astronomer and geographer ALEXANDER DALRYMPLE. Young, wealthy JOSEPH BANKS recognized the tremendous opportunity for natural history explorations, and developed an eager interest in this expedition. He contributed significant financial means to its preparation, reputedly on the order of 65 % of the entire budget, and was allowed to participate at his own expense. His personal staff included the Swedish botanists DANIEL SOLANDER and HERMANN SPÖRING, two professional artists and four servants. The contribution of the Crown toward the scientific aspects of the journey was mediocre, however.

JOHANN FABRICIUS visited his friend BANKS in London 1768, where he worked on the collections and assisted BANKS in the preparation of the voyage. Both were in their mid-20s at that time.

The H.M.S. ENDEAVOUR left England in the end of August 1768, with a course for Madeira. They reached Rio de Janeiro on 13 November. COOK, BANKS and SOLANDER approached the Portuguese viceroy on the next morning, asking for permission to replenish their supplies and to collect plants and insects in the region. They encountered serious objections, evidently a heritage of the century-long animosities between the two colonial empires, and the naturalists were prohibited from exploring the shore. BANKS submitted to this decision rather literally; however, his servants ventured out secretly for plants and insects on several nights. An English-born Portuguese officer, occasionally in charge of the patrol guarding the ENDEAVOUR, reputedly assisted in smuggling the catch aboard. A short visit followed on the last day to Raza Island, approximately 15 km offshore of Rio Bay. When the ENDEAVOUR set sail on 7 December, the naturalists had documented a total of 315 species of plants during these 24 days. The only other landing in South America occurred near Cape Horn, forced by strong currents and unfavorable winds. The expedition reached Tahiti on 13 April 1769. After having made the official astronomical observations, COOK explored the South Pacific in the search of a fictive southern continent. The journey ended successfully in June 1771.

Reconstruction of the origin and fate of the types of *Curculio tragiae* F.

1. The species clearly is neotropical. Five additional specimens were located in the natural history collections in Berlin, Dresden and Paris, and confirm the collecting site as Brazil. FABRICIUS (1775) referred to BANKS as the collector. The only Brazilian locations ever visited by BANKS are Rio de Janeiro and nearby Raza Island, between 13 November and 7 December 1768 during COOK's first voyage.
2. The minute size of the weevil, the remarkable observation of its association with *Tragia volubilis*, and the circumstances of the illicit nightly forays ashore suggest that the specimens emerged from pressed plants rather than having been observed and collected in the field. However, this conclusion remains speculative because specimen of *T. volubilis* could not be located in the plant collections of BANKS & SOLANDER.

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3. FABRICIUS obtained two specimens for study. The description was published four years after the return of the expedition.
4. One specimen was returned to BANKS. His collections (insects and plants) are housed in the Natural History Museum in London, each of them maintained separately from the general collections due to their historical significance. The second specimen was kept by FABRICIUS, and is curated in his Kiel Collection (now in Copenhagen).

Taxonomic assignment

Curculio tragiae belongs to the complex of species in *Nanobaris* CHAMPION, *Tytthobaris* CHAMPION and *Giveniopsis* CASEY. My examination of the relevant material revealed that *Giveniopsis setosella* HUSTACHE is a junior synonym of *C. tragiae*. The scarce, predominantly historical material available and the lack of host data make it difficult to revise the complex at this stage. Here, I follow KUSCHEL's (1983) suggestion made for *G. setosella*, and place *C. tragiae* in *Nanobaris*, as *Nanobaris tragiae* (F.). This assignment requires a modification of the original definition of *Nanobaris*, where species with elongate antennal club are precluded.

Diagnosis. Species of *Nanobaris* are notably small (2.0–2.8 mm) compared to most Baridinae. They can be recognized by the following combination of character states:

1. pygidium vertical, oval, projecting beyond elytral apices
2. dorsal vestiture of erect, widely spaced, setiform scales
3. antennal funicle of 7 segments, club ovate, as long as or shorter than funicular segments 2–7 combined, transition to funicle abrupt, or gradual when club elongate
4. mandibles crossed and projecting little when closed, outer face convex, inner edge with secondary tooth
5. anterior coxae separated by at least half their diameter
6. prosternal channel present
7. transition between prosternum and mesosternum abrupt
8. femora without ventral tooth
9. tibiae parallel-sided, straight, dorsobasal and ventromedian projections absent, premucro absent, ventrodistal tooth small
10. tarsal claws subconnate at base, straight

Distribution. Neotropical; recorded from southern Mexico, Guatemala, Belize, Honduras, Costa Rica, Panama and Brazil

Plant association. FABRICIUS (1775) cites *Tragia volubilis* (Euphorbiaceae) as the host plant of *N. tragiae*. The larval development is said to take place in the seeds (ZIMSEN 1964). *Tragia volubilis* is a widespread plant in open habitats recorded from southern Mexico to Brazil. The genus includes four described species.

Literature

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