Datziinae as a new subfamily name for the unavailable name Protopsychodinae Stebner et al., 2015, (Diptera: Psychodidae)

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ABSTRACT

In a recent paper a new subfamily of Psychodidae was inadequately named Protopsychodinae. This nomenclatural act cannot be considered as a valid name under ICZN regulations because the subfamily name is not based on the type genus *Datzia Stebner et al., 2015*, and furthermore the fossil genus *Protopsychoda Azar et al., 1999* was originally described under the subfamily Psychodinae. Therefore, the new family-group name Datziinae is herein proposed.

INTRODUCTION

Stebner et al. (2015) recently described a new subfamily of fossil Psychodidae. However, the establishment of a new subfamily Protopsychodinae *Stebner et al., 2015* with the type genus being *Datzia* is invalid under ICZN rules, article 29.1, because the subfamily name must be formed using the stem of the type genus name. Furthermore, *Protopsychoda Azar et al., 1999* is a valid genus described within the subfamily Psychodinae which would make Protopsychodinae (if validly established with *Protopsychoda* as the type genus) a junior synonym of Psychodinae (ICZN, article 23). The name Protopsychodinae is unavailable, and instead the new subfamily name Datziinae is established, based on *Datzia Stebner et al., 2015* as the type genus. Accordingly, the new subfamily name is herein proposed to include the type genus *Datzia* and the genus *Mandalayia Stebner et al., 2015*.

MATERIAL AND METHODS

The electronic version of this article in Portable Document Format (PDF) will represent a published work according to the International Commission on Zoological Nomenclature (ICZN), and hence the new names contained in the electronic version are effectively published under that Code from the electronic edition alone. This published work and the nomenclatural acts it contains have been registered in ZooBank, the online registration system for the ICZN. The ZooBank LSIDs (Life Science Identifiers) can be

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SYSTEMATIC PALAEONTOLOGY

Order: Diptera Linnaeus, 1758
Family: Psychodidae Newman, 1834

Datziinae new subfamily (replacing Protopsychodinae *Stebner et al., 2015*, unavailable under the ICZN Code)

urn:lsid:zoobank.org:act:2C47D449-A108-401B-829E-A67DD15FB56F.

Type-genus: *Datzia* *Stebner et al., 2015*

urn:lsid:zoobank.org:act:A8D8B8AE-229E-469F-A8F8-CA496B45FFA0.

Type-species: *Datzia* bispina

urn:lsid:zoobank.org:act:B094011C-331E-487E-8700-B4FB53EEB95C.

Material: Holotype male SMF Be 2379 and 7 male Paratypes; SMF Be 2376 Paratypes 6 males. Deposited at the Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt, Germany.

Type-locality: Hukawng Valley of the northern state of Kachin.

Stratigraphic horizon: 98.79 ± 0.62 million years, Upper Cretaceous (earliest Cenomanian) (*Shi et al., 2012*).

Diagnosis: unchanged (see *Stebner et al., 2015*, p. 6)

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Competing Interests

The authors declare there are no competing interests. Mónica M Solórzano Kraemer is an employee of the Senckenberg Forschungsinstitut und Naturmuseum, Sektion Mikropaläontologie I-Bernstein.

Author Contributions

- Frauke Stebner, Mónica M. Solórzano Kraemer, Sergio Ibáñez-Bernal and Rüdiger Wagner conceived and designed the experiments, performed the experiments, analyzed the data, contributed reagents/materials/analysis tools, wrote the paper, reviewed drafts of the paper.

New Species Registration

The following information was supplied regarding the registration of a newly described species:

1. This published work and the nomenclatural acts it contains have been registered in ZooBank.

The LSID for this publication is: urn:lsid:zoobank.org:pub:67C1C754-CFB9-45DE-AD72-62F11071AD43.

2. New subfamily Datziinae: urn:lsid:zoobank.org:act:2C47D449-A108-401B-829E-A67DD15FB56F

REFERENCES

Azar D, Nel A, Solignac M, Paicheler J-C, Bouchet F. 1999. New genera and species of phlebotomid and psychodid flies from the Lower Cretaceous amber of Lebanon (Insecta: Diptera: Phlebotomidae, Psychodidae). *Palaeontology* **42**:1101–1136 DOI 10.1111/1475-4983.00112.

Shi G, Grimaldi DA, Harlow GE, Wang J, Wang J, Yang M, Lei W, Li Q, Li X. 2012. Age constraint on Burmese amber based on U-Pb dating of zircons. *Cretaceous Research* **37**:155–163 DOI 10.1016/j.cretres.2012.03.014.

Stebner F, Solórzano Kraemer MM, Ibáñez-Bernal S, Wagner R. 2015. Moth flies and sand flies (Diptera: Psychodidae) in Cretaceous Burmese amber. *PeerJ* **3**:e1254 DOI 10.7717/peerj.1254.