

REPLACEMENT NAMES FOR THE THERAPSID GENERA *CRIOCEPHALUS* BROOM 1928 AND *OLIVIERIA* BRINK 1965.

by

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INTRODUCTION

Our knowledge of pre-mammalian synapsid evolutionary history has benefited from over a hundred years of fossil collecting, especially within the Permian-Triassic sediments of South Africa's Beaufort Group (Rubidge 1995) and the Cis-Ural region of Eastern Europe (Ivachnenko *et al.* 1997). In the course of our research and discussions we have discovered several errors in the present state of non-mammalian synapsid taxonomy. Here we propose emendations concerning the genera *Criocephalus* Broom 1928 and *Olivieria* Brink 1965.

Institution Abbreviations—**BP**, Bernard Price Institute for Palaeontological Research, University of the Witwatersrand, Johannesburg; **KM**, McGregor Museum, Kimberley.

Criocephalus

Broom (1928) erected the genus *Criocephalus* for a tapinocephalid dinocephalian. However, the name *Criocephalus* was first used by Mulsant (1839) for the cerambycid beetle *Cerambyx rusticus* Linnaeus, 1758 (Coleoptera; Insecta). Schiödte (1864) used the name *Criocephalum* for Mulsant's *Criocephalus*, despite the fact that the name *Criocephalum* had already been used by Dejean (1835) for a different cerambycid beetle. Broom's *Criocephalus vanderbyli* was based on KM 5138, a fragmentary specimen preserving the occipital portion of a cranium from the *Tapinocephalus* Assemblage Zone of the farm Abrahamskraal (Prince Albert District, South Africa). Boonstra (1969) placed additional remains from Zimbabwe in an undescribed new species, *C. gunyankaensis* [*nomen nudum*]. Because *Criocephalus* Broom, 1928, is preoccupied by *Criocephalus* Mulsant, 1839, it requires a new generic name, for which we propose *Criocephalosaurus* *nom. nov.* *Criocephalosaurus* is derived from the Greek words *krios* (ram), *kephalos* (head), and *sauros* (lizard), and is masculine.

Olivieria

The therocephalian therapsid *Olivieria parringtoni* was named by Brink (1965). The holotype for this taxon, now catalogued as BP/1/3849 (formerly BPI M379), preserves a complete skull and partial skeleton

that was recovered from high in the *Lystrosaurus* Assemblage Zone of the Bergville District, KwaZulu-Natal Province, South Africa. However, the name *Olivieria* had already been used over a century earlier by Robineau-Desvoidy (1830) as a new generic name for *Musca lateralis* Fabricius, 1775, a tachinid fly (Diptera; Insecta). Earlier still, *M. lateralis* Fabricius had been made the type species of the genus *Eriothrix* by Meigen (1803). To add to the confusion, *M. lateralis* Fabricius was found to have a senior homonym, *Musca lateralis* Linnaeus, 1758. Therefore, *Musca rufomaculata* De Geer (1776), the most senior available synonym of *M. lateralis* Fabricius, became the type species of *Eriothrix* Meigen and *Olivieria* Robineau-Desvoidy. The currently valid name for this species of fly is *Eriothrix rufomaculata* (De Geer 1776), with *Olivieria* Robineau-Desvoidy in the synonymy of *Eriothrix* Meigen (Herting 1984).

As if the situation were not complex enough, Meigen (1838) also used the name *Olivieria*, in reference to a different tachinid fly (*Tachina longirostris* Meigen 1824). By principles of priority, *Olivieria* Meigen 1838 and *Olivieria* Brink 1965 are both junior homonyms of *Olivieria* Robineau-Desvoidy, 1830. The former was recognized as preoccupied in 1848 and two replacement names were advanced: *Rhynchosia* Macquart, 1848 and *Cotilla* Gistel 1848. *Olivieria* Meigen, 1838 and its replacements are currently placed in the synonymy of *Aphria* Robineau-Desvoidy 1830 because the type species *Aphria abdominalis* is a junior synonym of *Tachina longirostris* Meigen 1824 (see Herting 1984). However, the therocephalian "*Olivieria*" *parringtoni* still requires a new generic name, for which we propose *Olivierosuchus* *nom. nov.* as a replacement. *Olivierosuchus* is derived from the Oliviershoek Pass where the type specimen was found and the Greek *sukhous*, meaning crocodile. It is masculine.

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REFERENCES

- BOONSTRA, L. D. 1969. The fauna of the *Tapinocephalus* zone. *Annals of the South African Museum*, **56**, 1-73.
- BRINK, A. S. 1965. A new ictidosuchid (Scaloposauria) from the *Lystrosaurus*-Zone. *Palaeontologia africana*, **9**, 129-138.
- BROOM, R. 1928. On *Tapinocephalus* and two other dinocephalians. *Annals of the South African Museum*, **22**, 427-438.
- DEJEAN, P. F. 1835. *Catalogue des coléoptères de la collection 2nd édition*. Paris: Méquignon-Marvis Père.
- FABRICIUS, J. C. 1775. *Systema Entomologiae: Sistens Insectorum Classes, Ordines, Genera, Species, Adiectis Synonymis, Locis, Descriptionibus, Observationibus*. Flensburgi et Lipsiae, in officina libraria Kortii.
- GEER, C. de. 1776. *Mémoires pour servir à l'histoire des insectes*. I. Vol. **6**, 1-523.
- GISTEL, J. 1848. *Naturgeschichte des Thierreichs für höhere schulen*. Stuttgart: Hoffman'sche Verlags-Buchhandlung.
- HERTING, B. 1984. Catalogue of Palearctic Tachinidae (Diptera). *Stuttgarter Beitrage zur Naturkunde Serie A (Biologie)*, **369**, 1-228.
- IVACHNENKO, M. F., V. K. GOLUBEV, Y. M. GUBIN, N. N. KALANDADZE, I. V. NOVIKOV, A. G. SENNIKOV, and A. S. RAUTIAN. 1997. *Permskie i Triasovye tetrapody Vostochnoi Evropy*. Moscow: GEOS.
- LINNAEUS, C. 1758. *Systema Naturae per Regna Tria Naturae, Secundum Classes, Ordines, Genera, Species, cum Characteribus, Differentiis, Synonymis, Locis. Ed. 10, Reformata*. Holmiae, impensis direct. Laurentii Salvii.
- MACQUART, J. 1848. Nouvelles observations sur les Diptères D'Europe de la Tribu des Tachinaires. *Annales de la Société entomologique de France*, (2)**6**, 85-138.
- MEIGEN, J.W. 1803. *Magazin für Insektenkunde* (Illiger), **2**, 259-281.
- MEIGEN, J.W. 1824. *Systematische Beschreibung der Europäischen zweiflügligen insekten*, **4**, 1-428.
- MEIGEN, J.W. 1838. *Systematische Beschreibung der Europäischen zweiflügligen insekten*, **7**, 1-434.
- MULSANT, M. E. 1839. Longicornes. In: Mulsant, M. and Rey, C. Eds., *Histoire Naturelle des Coléoptères de France*. Paris, Maisson; Lyon, C. S. Jeune.
- ROBINEAU-DESVOIDY, A. J. B. 1830. Essai sur les Myodaires. Mémoires présentés par divers savans à L'Académie royale science de l'Institut de France. Paris: L'Imprimerie royale. Vol. **2**, Series **1**, 228.
- RUBIDGE, B. S. 1995. (ed) *Biostratigraphy of the Beaufort Group (Karoo Supergroup)*. South African Committee for Stratigraphy, Biostratigraphic Series. **1**, 1-146.
- SCHIÖDTE, J. C. 1864. Danmarks cerambycidae. *Naturhistorisk Tidsskrift*, (3)**2**.

As if the situation were not complex enough, Meigen (1838) also used the name *Olivieria* in reference to a different tachinid fly (*Tachina longirostris* Meigen 1838). By principles of priority, *Olivieria* Meigen 1838 and *Olivieria* Brink 1965 are both junior homonyms to *Olivieria Robineau-Desvoidy*, 1830. The former was recognized as preoccupied in 1848 and two replacement names were advanced: *Rhynchostia* Macquart, 1848 and *Cotilla* Gistel 1848. *Olivieria* Meigen, 1838 and its replacements are currently placed in the synonymy of *Aphura Robineau-Desvoidy*, 1830 because the type species *Aphura abdominalis* is a junior synonym of *Tachina longirostris* Meigen 1838 (see Herting 1984). However, the therocephalian "*Olivieria*" parvintoni still requires a new generic name, for which we propose *Olivierosuchus* nov. gen. as a replacement. *Olivierosuchus* is derived from the Oliviertschok Pass where the type specimen was found and the Greek *suchos*, meaning crocodile. It is masculine.

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Research and discussions we have discovered several errors in the present state of non-mammalian synapsid taxonomy. Here we propose emendation concerning the genus *Crocaphalus* Broom 1928 and *Olivieria* Brink 1965.

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Crocaphalus

Broom (1928) erected the genus *Crocaphalus* for a tapinocephalian dinocephalian. However, the name *Crocaphalus* was first used by Mulsant (1839) for the cerambycid beetle *Cerambyx waltersi* Linnaeus, 1758 (Coleoptera; Insecta). Schiödt (1864) used the name *Crocaphalus* for Mulsant's *Crocaphalus*, despite the fact that the name *Crocaphalus* had already been used by Dejace (1832) for a different cerambycid beetle. Broom's *Crocaphalus vanderbyli* was based on KM 2138, a fragmentary specimen preserving the occipital portion of a cranium from the Tapinocephalus Assemblage Zone of the farm Abrahamsthal (Prince Albert District, South Africa; Broom 1969) placed additional remains from Zimbabwe in an undescribed new species, *C. kunyankwale* (nomen nudum). Because *Crocaphalus* Broom, 1928, is preoccupied by *Crocaphalus* Mulsant, 1839, it requires a new generic name, for which we propose *Crocaphalosaurus* nov. gen. *Crocaphalosaurus* is derived from the Greek words *krota* (ram), *kaphalos* (head), and *sauros* (lizard), and is masculine.

Olivieria

The therocephalian thapsid *Olivieria parvintoni* was named by Brink (1965). The holotype for this taxon, now catalogued as BP/MS/9 (formerly BP/MS/79), preserves a complete skull and partial skeleton