

Ann. Naturhist. Mus. Wien	90	A	59–62	Wien, Jänner 1989
---------------------------	----	---	-------	-------------------

A new swift (Aves: Apodidae) from the late Eocene of France

By Jiří MLÍKOVSKÝ¹⁾

(With 1 plate)

Manuscript submitted on November, 10th 1986

Summary

A new swift of the family Apodidae, *Cypseloides mourerchauvireae* sp. n., is described from the late Eocene (Phosphorites du Quercy) of France. It represents the earliest record of the subfamily Cypseloidinae and the second record of this subfamily, which is now confined to the Neotropics, in the Old World.

Zusammenfassung

Aus dem Ober-Eozän Frankreichs (Phosphorites du Quercy) wird eine neue Seglerart der Familie Apodidae, *Cypseloides mourerchauvireae* sp. n., beschrieben. Es ist die älteste bisher bekannte Seglerart der Unterfamilie Cypseloidinae und zugleich der zweite Fund dieser gegenwärtig auf die neotropische Region der Alten Welt beschränkten Unterfamilie.

The swifts (Apodidae) are at present a widespread group of small, swallow-like, aerial-insectivorous birds. The group includes approximately 82 living species belonging to 14 genera (WOLTERS 1976). The systematics and evolution of swifts have been studied only sporadically so far, but it has now been established with reasonable probability that the Cypseloidinae are the ancestral subfamily of the Apodidae, from which the derived Apodinae evolved (LACK 1956, BROOKE 1970a, ZUSI & BENTZ 1982).

Relatively few fossil swifts have been described so far, including (in geochronological order) *Scaniacypselus wardi* HARRISON, 1984 from the middle Eocene of Great Britain, *Cypseloides ignotus* (MILNE-EDWARDS, 1871) from the early Miocene (Aquitainian) of France, *Apus gaillardi* ENNOUCHI, 1930 from the middle Miocene of France, *Apus wetmorei* BALLMANN, 1976 from the late Miocene of Italy, *Chaetura baconica* JÁNOSSY, 1977 from the early Pliocene of Hungary, *Apus submelba* JÁNOSSY, 1972 from the middle Pleistocene of Hungary, and *Tachornis uranocetes* OLSON, 1982 from the late Pleistocene (Wisconsinian) of Puerto Rico. Of the other fossil swifts, *Collocalia incerta* MILNE-EDWARDS, 1871 and *Cypselavus*

¹⁾ Author's address: Jiří MLÍKOVSKÝ, Department of Evolutionary Biology, Czechoslovak Academy of Sciences, Sekaninova 28, CS-128 00 Praha 2. – Czechoslovakia.

intermedius GAILLARD, 1938, both from the early Miocene (Aquitanian) of France, were synonymized with *Cypseloides ignotus* (MILNE-EDWARDS, 1871) by COLLINS (1976), and *Cypselavus gallicus* GAILLARD, 1908 from the late Eocene or early Oligocene (Phosphorites du Quercy) of France was transferred from the family Apodidae to Aegialornithidae by COLLINS (1976) and to the Hemiprocnidae by D. S. PETERS (1985). Both the latter families are closely interrelated (cf. MOURER-CHAUVIRÉ 1978, D. S. PETERS 1985) and may even be considered synonymous (MLÍKOVSKÝ 1982, 1985).

Anatomical nomenclature follows BAUMEL et al. (1979) throughout the present paper.

Systematic description

Order Apodiformes J. L. PETERS, 1940

Family Apodidae HARTERT, 1897

Genus *Cypseloides* STREUBEL, 1848

Cypseloides mourerchauvireae, sp. n.

(Plate 1)

Holotype: Right tibiotarsus, with extremitas proximalis and borders of sulcus cartilaginis tibialis slightly abraded; Naturhistorisches Museum Wien, Geologisch-Paläontologische Abteilung, 1988/27. Collectors and date of collection unknown, but probably bought by the Museum at some time during the 2nd half of the 19th century (O. SCHULTZ, pers. communication), possibly during the 1870s, when the Quercy deposits, from which the holotype originates, were excavated most extensively (cf. MOURER-CHAUVIRÉ 1980).

Age: Uncertain, but probably late Eocene. A number of fossiliferous localities are known from the vicinity of Bach, the type locality of *Cypseloides mourerchauvireae* sp. n., ranging from the late Eocene Bartonian to the early Oligocene Stampian (VIANEY-LIAUD 1980). Fortunately, most of the bird bone remains from Bach which are deposited in the Wien Museum belong to the genus *Aegialornis* (MLÍKOVSKÝ, in prep.) which is absent above the „grande coupure“ in the Oligocene, but which is abundant below it in the late Eocene deposits (MOURER-CHAUVIRÉ 1980: 31). Because the color and preservation state of all of these bones are rather similar, it may be assumed that all of them originated from the same locality and from the same horizon, i. e. the late Eocene in this case.

Locality: Bach near Lalbenque, Dept. Lot, France.

Material: Holotype only.

Diagnosis: Swift of the genus *Cypseloides*, differing from *Cypseloides ignotus*, the only other fossil *Cypseloides* swift, by its larger size (see below) and more developed crista fibularis.

Etymology: Named in honor of Madame le Professeur Cécile MOURER-CHAUVIRÉ in regard for her outstanding work on fossil birds, particularly on those from the Phosphorites du Quercy.

Measurements: (For comparison, equivalent measurements on a tibiotarsus of *Cypseloides ignotus* are given in parentheses – after COLLINS 1976): greatest proximodistal length = 32.6 mm (21.1 mm), greatest lateromedial width of extremitas distalis = 3.6 mm (2.2 mm), smallest craniocaudal width of scapula = 1.3 mm (1.0 mm), smallest lateromedial width of scapula = 1.4 mm (0.9 mm).

Discussion: I compared the holotype tibiotarsus of *Cypseloides mourerchauvireae* sp. n. with representatives of nearly all non-passeriform and many passeriform bird families. It was similar only to the tibiotarsus of the genus *Cypseloides*, the extremitas distalis of which is rather unique among birds (see Figure 1 in COLLINS 1976 and the Plate in the present paper).

The extant genus *Cypseloides*, the only true representative of the subfamily Cypseloidinae, is at present distributed in Neotropics only (BROOKE 1970b, WOLTERS 1976). However, COLLINS (1976) discovered the genus in Aquitanian deposits of France. *Cypseloides mourerchauvireae* is thus the second species of this genus described from the European Tertiary and at the same the oldest representative of the subfamily Cypseloidinae known so far. From the zoogeographical point of view, this is still another Neotropical element discovered in the Phosphorites du Quercy (see MOURER-CHAUVIRÉ 1981, 1982, 1983, 1985 a, b).

Acknowledgements: I am grateful to Dr. Ortwin SCHULTZ (Wien) for allowing me to study the specimen under his care and for his hospitality in the Wien Museum during my visit in December 1982. Photographic credit is due to Dr. Ivan HORÁČEK (Praha).

References

- BALLMANN, P. (1976): Fossile Vögel aus dem Neogen der Halbinsel Gargano (Italien), zweiter Teil. – Scripta geol., **38**: 1–59. – Leiden.
- BAUMEL, J. J., A. M. LUCAS, J. E. BREAZILE & H. E. EVANS (Eds., 1979): Nomina anatomica avium. – 637 pp. – London (Academic Press).
- BROOKE, R. K. (1970 a): Taxonomic and evolutionary notes on the subfamilies, tribes, genera and subgenera of the swifts. – Durban Mus. Novitates, **9**: 13–24. – Durban.
- (1970 b) Zoogeography of swifts. – Ostrich, Suppl. **8**: 47–54. – Cape Town.
- COLLINS, C. T. (1976): A review of the Lower Miocene swifts (Aves: Apodidae). – Smithson. Contrib. Paleobiol., **27**: 129–132. – Washington.
- ENNOUCHI, E. (1930): Contribution à l'étude de la faune du Tortonien de La Grive-St-Alban (Isère). – 135 pp. – Paris (Les Presses Modernes).
- GAILLARD, C. (1908): Les oiseaux du Phosphorites du Quercy. – Ann. Univ. Lyon, n. s., **1** (23): 1–178. – Lyon.
- (1938): Contributions à l'étude des oiseaux fossiles. – Arch. Mus. Hist. nat. Lyon **15** (2): 1–100. – Lyon.
- HARRISON, C. J. O. (1984): A revision of the fossil swifts (Vertebrata, Aves, suborder Apodi), with descriptions of three new genera and two new species. – Meded. Werkgr. Tert. Kwart. Geol., **21**: 157–177. – Leiden.
- HARTERT, E. (1897): Das Tierreich 1 (1): Podargidae, Caprimulgidae and Macropterygidae. – Berlin (R. Friedländer und Sohn).
- JÁNOSSY, D. (1972): Die mittelpleistozäne Vogelfauna der Stránská Skála. – Anthropos, **20**: 35–64. – Brno.
- (1977): Plio-Pleistocene bird remains from the Carpathian basin. III. Strigiformes, Falconiformes, Caprimulgiformes, Apodiformes. – Aquila, **84**: 9–36. – Budapest.
- LACK, D. (1956): A review of the genera and nesting habits of swifts. – Auk, **73**: 1–32. – Washington.
- MILNE-EDWARDS, A. (1871): Recherches anatomiques et paléontologiques pour servir à l'histoire des oiseaux fossiles de la France II. – 632 pp. – Paris (Victor Masson et Fils).
- MLÍKOVSKÝ, J. (1982): Towards a new classification of birds. – In: V. D. IL'ICĚV & V. M. GAVRILOV (Eds.), XVIII congressus internationalis ornithologicus. Abstracts of symposia and poster presentations: 248–251. – Moskva (Nauka).
- (1985): Towards a new classification of birds. – In: V. D. IL'ICĚV & V. M. GAVRILOV (Eds.), Acta XVIII congressus internationalis ornithologici: 1145–1146. – Moskva (Nauka).
- MOURER-CHAUVIRÉ, C. (1978): La poche à phosphate de Sainte-Néboule (Lot) et sa faune de Vertébrés du Ludien supérieur. 6. Oiseaux. – Palaeovertebrata, **8**: 217–229. – Montpellier.
- (1980): The Archaeotrogonidae of the Eocene and Oligocene phosphorites du Quercy (France). – Contrib. Sci., Nat. Hist. Mus. Los Angeles Co., **330**: 17–31. – Los Angeles.

- (1981): Première indication de la présence de Phorusracidés, famille d'oiseaux géants d'Amérique du Sud, dans le Tertiaire européen: *Ameghinornis* nov. gen. (Aves: Ralliformes) des Phosphorites du Quercy, France. – *Géobios*, **14**: 637–647. – Lyon.
 - (1982): Les oiseaux fossiles des Phosphorites du Quercy (Éocène supérieur à Oligocène supérieur): implications paléobiogéographiques. – *Géobios*, Suppl. **6**: 413–426. – Lyon.
 - (1983): Les Gruiformes (Aves) des Phosphorites du Quercy (France). 1. Sous-ordre Cariamae (Cariamidae et Phorusrhacidae) systématique et biostratigraphie. – *Palaeovertebrata*, **13**: 83–143. – Montpellier.
 - (1985 a): Les Todidae (Aves, Coraciiformes) des Phosphorites du Quercy (France). – *Proc. kon. nederl. Akad. Wetensch.*, (B) **88**: 407–414. – Amsterdam.
 - (1985 b): Nouvelles découvertes d'oiseaux Eocènes et Oligocènes dans les Phosphorites du Quercy, France: les Idiornithinae (Ralliformes, Cariamidae). – In: V. D. IL'ICĚV & V. M. GAVRILOV (Eds.), *Acta XVIII congressus internationalis ornithologici*: 234–240. – Moskva (Nauka).
- OLSON, S. L. (1982): A new species of palm swift (Tachornis: Apodidae) from the Pleistocene of Puerto Rico. – *Auk*, **99**: 230–235. – Washington.
- PETERS, D. S. (1985): Ein neuer Segler aus der Grube Messel und seine Bedeutung für den Status der Aegialornithidae (Aves: Apodiformes). – *Senckenbergiana lethaea*, **66**: 143–164. – Frankfurt am Main.
- PETERS, J. L. (1940): Check-list of birds of the World IV. – Cambridge (Harvard University Press).
- STREUBEL, A. V. (1848): Die Cypseliden des Berliner Museums. – *OKEN's Isis* 1848: 348 ff.
- VIANEY-LIAUD, M. (1980): La paléontologie du Quercy: les phosphorites. – *Quercy Recherche*, **34**: 24–42.
- WOLTERS, H. E. (1976): Die Vogelarten der Erde. 2. Lfg. – p. 81–160. – Hamburg (Paul Parey).
- ZUSI, R. L. & G. D. BENTZ (1982): Myology of the purple-throated carib (*Eulampis jugularis*) and other hummingbirds (Aves: Trochilidae). – *Smithson. Contrib. Zool.*, **385**: 1–70. – Washington.

Explanation of the plate

Plate 1

Holotype tibiotarsus of the *Cypseloides mourerchauvireae* sp. n. from the late Eocene of France.

A – dorsal view, B – lateral view, C – plantar view, D – medial view. Views A, C and B, D at slightly different magnifications. Greatest length of the specimen is 32.6 mm.

Photographs: Ivan HORÁČEK (Praha).



A



B



C



D

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Annalen des Naturhistorischen Museums in Wien](#)

Jahr/Year: 1989

Band/Volume: [90A](#)

Autor(en)/Author(s): Mlikovsky Jiri

Artikel/Article: [A new swift \(Aves: Apodidae\) from the late Eocene of France 59-62](#)