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QUADRIFINA | Band 4 | 117-124 | 15. Dezember 2001

Notes on the genus *Focillopis* HAMPSON, 1926 (Lepidoptera: Noctuidae: Catocalinae)

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Abstract

Focillopis HAMPSON, 1926 is redescribed with its type-species *Focillopis eclipsia* HAMPSON, 1926. This species is illustrated with both sexes and due to genitalic characters provisionally placed in the Catocalinae. The lectotype is designated. The redescription is to verify the exclusion of *Catada dichroana* (VIETTE, 1958) [*Focillopis*] and *Catada antevorta* (VIETTE, 1958) [*Focillopis*] from *Focillopis* (LÖDL 1999).

Zusammenfassung

Focillopis HAMPSON, 1926 wird mit seiner Typusart *Focillopis eclipsia* HAMPSON, 1926 wiederbeschrieben. Die Art wird in beiden Geschlechtern abgebildet und wegen des allgemeinen Erscheinungsbildes der Genitalien provisorisch zu den Catocalinae gestellt. Der Lectotypus wird designiert. Die Wiederbeschreibung war nötig, um den Ausschluß der beiden Arten *Catada dichroana* (VIETTE, 1958) [*Focillopis*] und *Catada antevorta* (VIETTE, 1958) [*Focillopis*] von *Focillopis* (LÖDL 1999) zu bestätigen.

Key words: *Catada*, Catocalinae, Ethiopian Region, *Focillopis*, redescription, West-Africa.

Introduction

Traditionally the genus *Focillopis* HAMPSON, 1926 is placed in the Calpinae (= Ophiderinae) (NYE 1975, POOLE 1989). First described as a monotypic genus with the type-species *Focillopis eclipsia* HAMPSON, 1926, two more species had been added by VIETTE (1958): *Focillopis dichroana* VIETTE, 1958 and *Focillopis antevorta* VIETTE, 1958. Both taxa were recognized to belong to the genus *Catada* WALKER, [1859] 1858 by LÖDL (1999). Aim of this paper is to verify the transfer of these two species by redescribing the type-species of *Focillopis*. *Focillopis* clearly has nothing to do with the genus *Catada* and now remains monotypic. The transfer to the subfamily Catocalinae is provisional. We have no reliable definition of Catocalinae so far. The same is true for Calpinae. However, some characters of the genitalia lead the author to the opinion that an inclusion in the Catocalinae s.l. is a practical solution for the moment. The anatomy of the male copulatory system turned out to be quite complex and is illustrated and discussed in detail.

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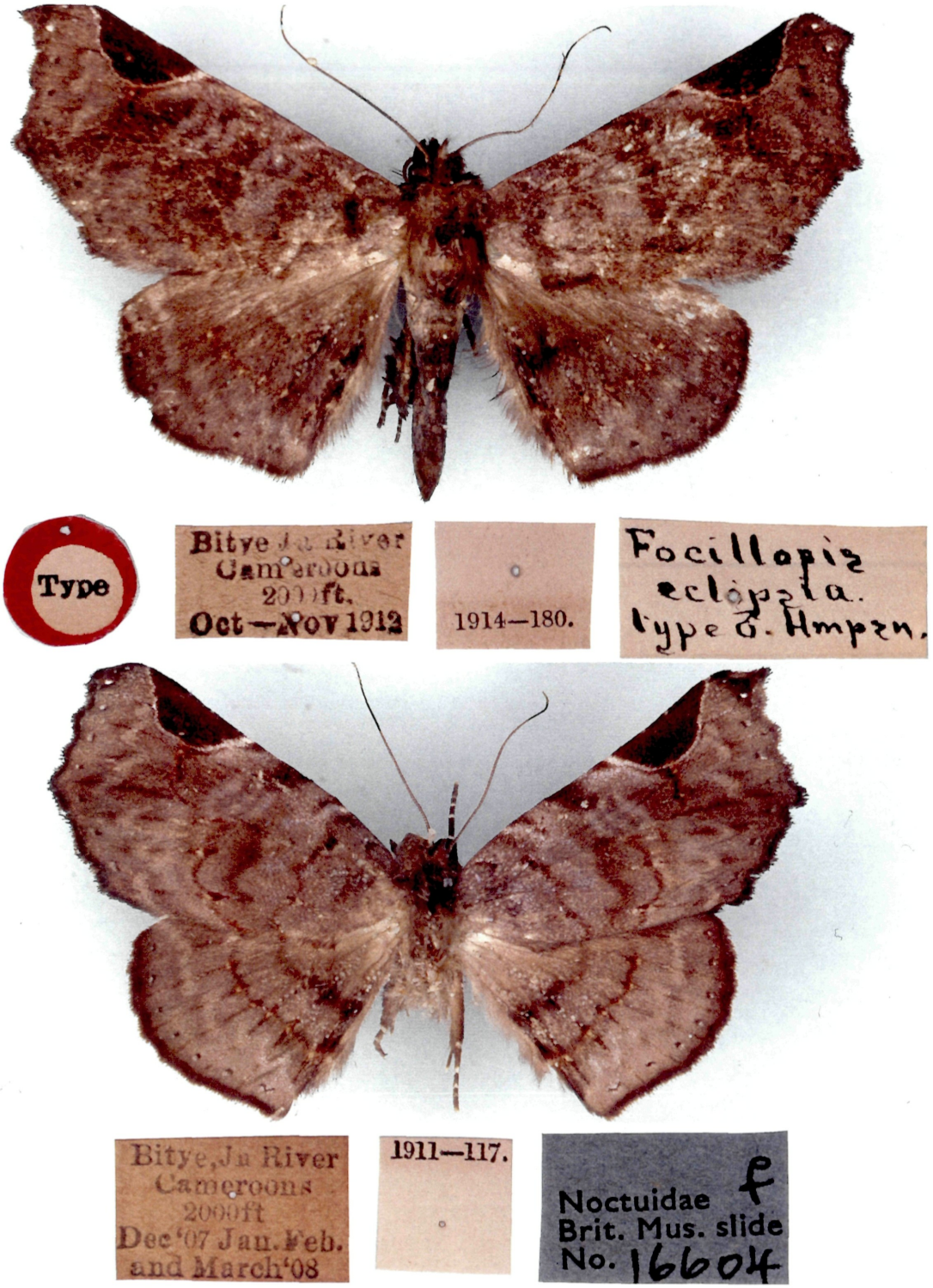

Figs. 1: *Focillopis eclipsia* HAMPSON, 1926, lectotype ♂.- **Fig. 2**: dto.- Paralectotype ♀.

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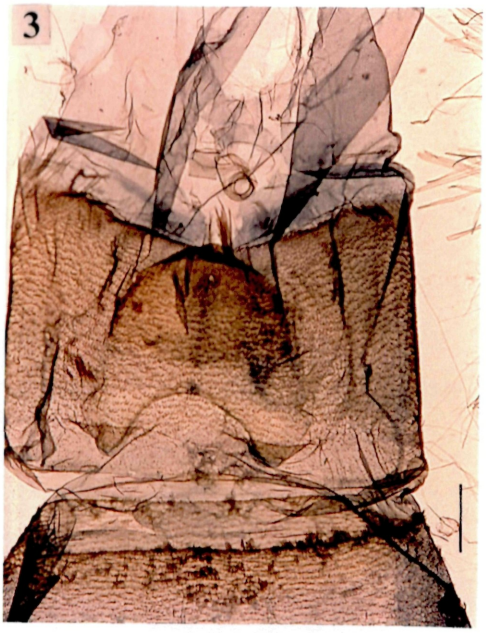

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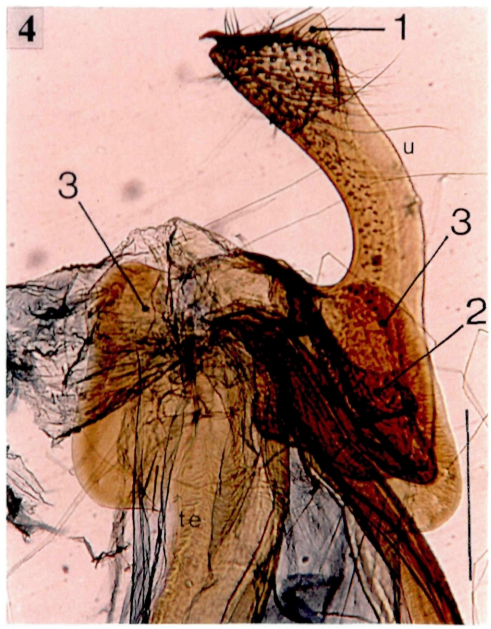

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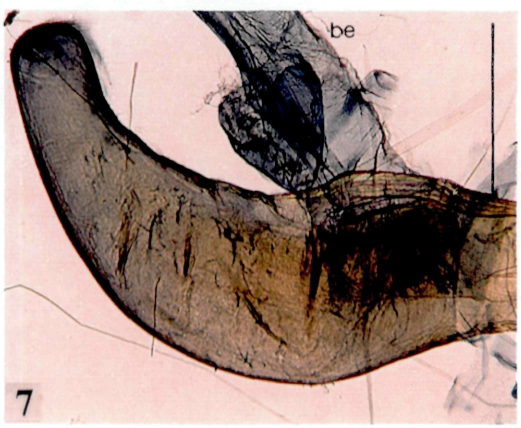

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Figs. 3-8 *Focillopis eclipsia* HAMPSON, 1926, ♂-lectotype, Noctuidae Brit. Mus. slide No. 16602 (previous page / vorige Seite):

Fig. 3: 8th abdominal segment. Scale = 0.5 mm.- **Fig. 4**: Uncus with lappets 1 and 2. Lappet 3 is situated on the caudal part of the tegumen; te = tegumen; u = uncus. Scale = 0.5 mm.- **Fig. 5**: Juxta (jx) and horn-like processes of the valves. Scales = 0.5 mm.- **Fig. 6**: Right valve. Scale = 0.5 mm.- **Fig. 7**: Coecum and bulbus ejaculatorius (be). Scale = 0.5 mm.- **Fig. 8**: Distal end of aedeagus. Scale = 0.1 mm.

Focillopis eclipsia HAMPSON, 1926

(Figs. 1-17)

Type material:

Lectotype: ♂, "Bitye Ja River Cameroons 2000ft. Oct-Nov 1912 \ Type \ 1914-180. \ Focillopis eclipsia. type ♂. Hmpsn. \ Noctuidae Brit. Mus. slide No. 16602 \ [slide No. 16603, foreleg, hindleg]" (BMNH) (Fig. 1). The lectotype is designated here according to the Rules of Zoological Nomenclature (ICZN) as it is necessary to stabilize the nomenclature within the Noctuids and to enable the exact definition of the genus in relation to *Catada*.

Paralectotypes: 2 ♀♀, Bitye, Ja River, Cameroons, 2000ft., Dec.'07 Jan. Feb. and March '08, 1911-117., Noctuidae Brit. Mus. slide No. 16604 (BMNH) (Fig. 2).- 1 ♀, [Ghana] Gold Coast, Kumasi, Sanders (BMNH).- 1 ♂, 1 ♀, S. Nigeria, Old Calabar, Rutherford, Crompton (BMNH).

Description

Head: Chocolate brown, antennae with short cilia. Labial palps short, upturned, dark chocolate brown. Third joint very short with ivory-coloured tip.

Thorax and abdomen (Fig. 3): Dark reddish or greyish brown. Thorax with long hair-like scales, abdomen smoothly scaled. Legs covered with hair-like scales, especially the forelegs and the hindlegs wear big tufts of hairs. The tarsus is marked with white. The 8th sternite is indented with two lobes on its cephal margin, the 8th tergite shows a distinct plate-like fold in the middle (Fig. 3).

Wings: Wingspan = 35-41 mm. Ground colour of both wings is greyish brown with a lilac touch. The outer margin is pronged, a pronounced apex is present. Most striking feature is a saddle-like, chocolate brown patch along the apical portion of the costa. The lines and bands in both wings are present. They are waved, of reddish brown colour and marked with small pale dots. Two small, white dots mark the apex. The fringe in both wings is dark brown.

Male genitalia (Figs. 3-8, 12-15): Very complex genital densely covered with hair-like scales (Fig. 12). Huge sacculus coremata are present. The typical characters of the genitalia can be characterized by the following punctation:

- The uncus is aberrant, consisting of a short and strong arm with a tiny but prominent terminal hook (Fig. 13). Two pairs of lappets are present. The first on the terminal portion which is densely covered with bristles (Fig. 4, lappet no. 1). And the second on the uncus base (Fig. 4, lappet no. 2).
- The anal tube is skinny, a heavily sclerotized scaphium is not visible. There is no scaphial pocket (LÖDL 2000) due to the lack of a hook-shaped uncus.
- The tegumen is stout and rounded and sitting on the valve-vinculum-frame like a hump. On the terminal portion the tegumen wears a pair of big, flat, wing-like lappets (Fig. 4, lappet no. 3). Between these lappets the uncus-device is sitting on "the neck of the teguminal hump".
- The juxta is divided into two coriaceous, longitudinal bars (Fig. 5).
- The vinculum-frame (Fig. 14) is big and prominent and square in shape. This device is closely bound to another frame system which originates from the valve-corpus, particularly from its dorsal portion.
- The valve (Fig. 12) is reduced to a dorsally situated frame system linked with the vinculum. In the cephal part it forms a loop, in the caudal part it is like a strong, longitudinally folded arm (Fig. 6).

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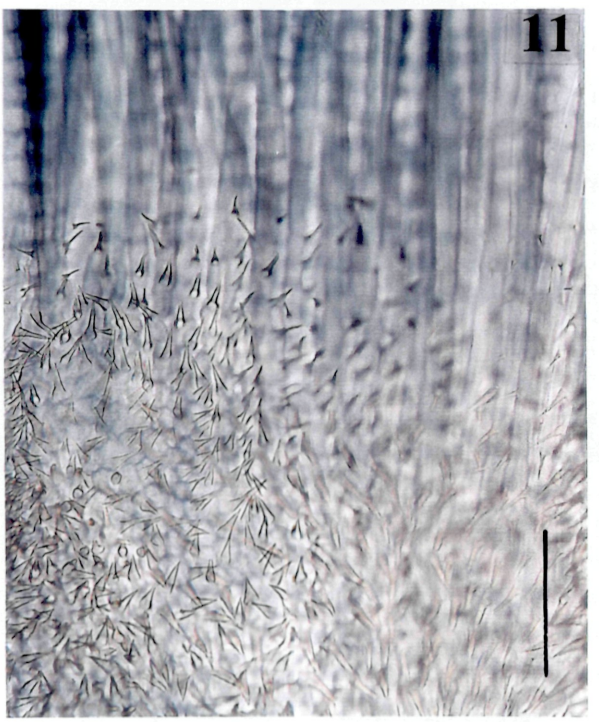

Figs. 9-11 *Focillopis eclipsia* HAMPSON, 1926, paralectotype ♀-genital, Noctuidae Brit. Mus. slide No. 16604:

Fig. 9: Papillae and ductus bursae. Scale = 0.5 mm.- **Fig. 10**: Ductus seminalis and cervix. Scale = 0.1 mm.- **Fig. 11**: Spines of bursa. Scale = 0.1 mm.

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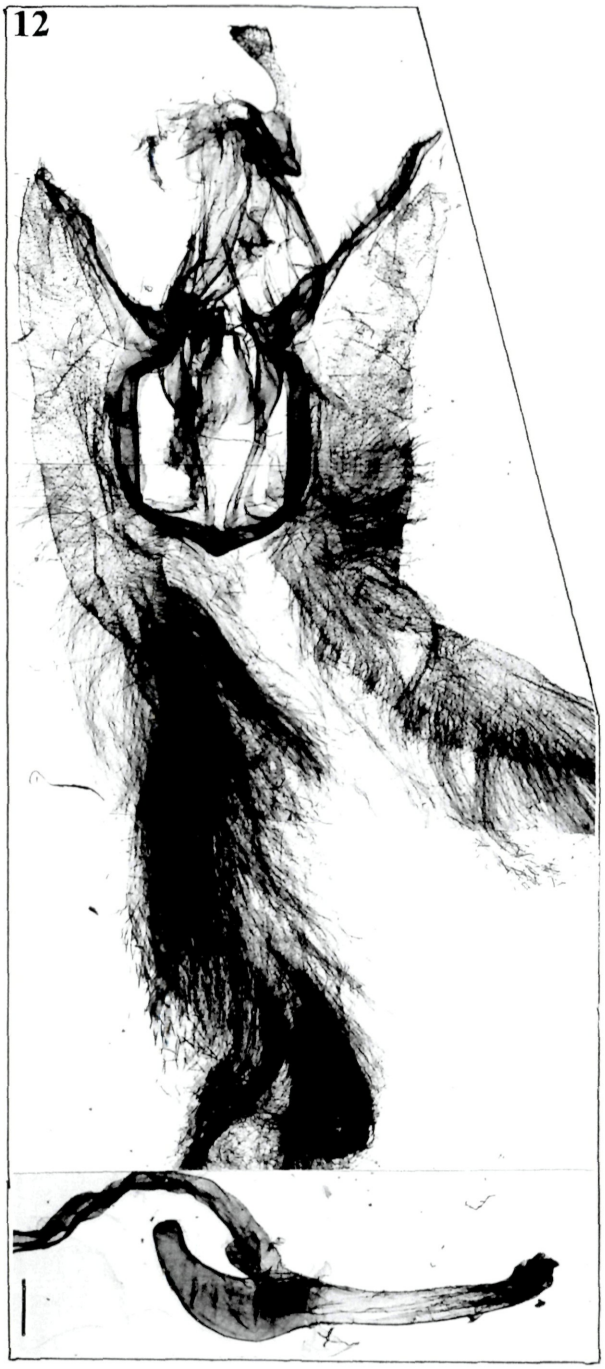

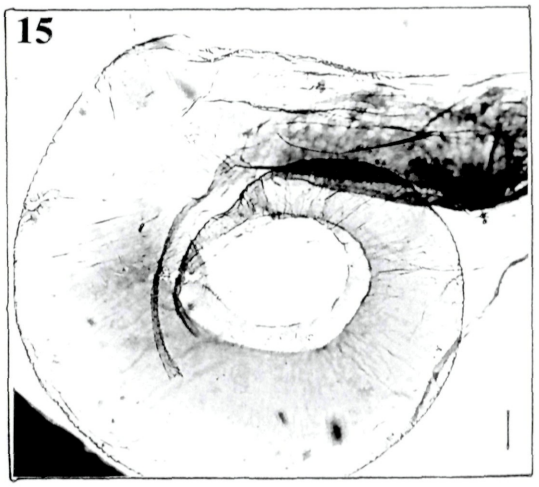

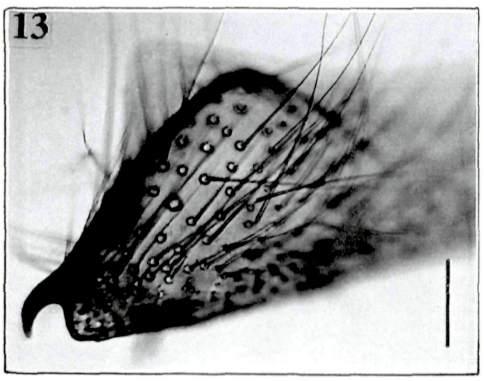

Figs. 12-15 *Focillopis eclipsia* HAMPSON, 1926, lectotype, ♂-genital, Noctuidae Brit. Mus. slide No. 16602:

Fig. 12: Corpus genitalis and aedeagus. Scale = 0.5 mm.- **Fig. 13**: Terminal hook of uncus. Scale = 0.1 mm.- **Fig. 14**: Vinculum-frame and processes of bases of valves. Scale = 0.5 mm.- **Fig. 15**: Proximal portion of bulbus ejaculatorius. Scale = 0.1 mm.

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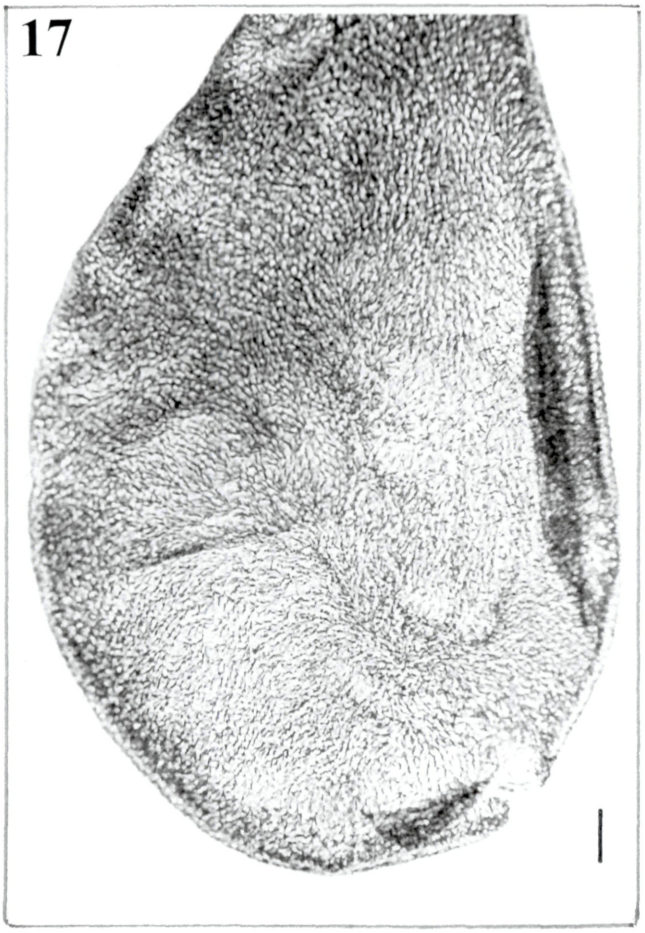

Figs. 16-17 *Focillopis eclipsia* HAMPSON, 1926, paralectotype ♀-genital, Noctuidae Brit. Mus. slide No. 16604:

Fig. 16: Genital, total. Scale = 0.5 mm.- **Fig. 17**: Bursa. Scale = 0.1 mm.

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The inner bases of the dorsal margins of the valves (near the caudal articulation to the vinculum-tegumen-frame) wear two straight horns (Fig. 5). The sacculus coremata are extremely big and extend from the caudal part of the valves to remarkably long tubes (Fig. 12). These tubes are quite longer than the valves.

- The aedeagus (Fig. 12) can be divided into two parts: The coecum (Fig. 7) is enlarged and curved dorsally. The cephal end of the coecum is blunt. The long caudal part is more or less straight and ends into a heavily sclerotized snout-like mouth (Fig. 8). The ventral surface wears a hook-like tooth (Fig. 12). The bulbus ejaculatorius is strong and long. Its proximal part consists of a huge and broad spiral (Fig. 15).

Female genitalia (Figs. 9-11, 16-17): The female genital is rather complex too. The overall-length is 7.8 mm. Here the main characters:

- The papillae (Fig. 9) are of normal size and shape.
- The apophyses, especially the apophyses posteriores are extremely long (Fig. 9). The length of the apophyses posteriores in relation to the overall-length is 0.23.
- The ostium is simple and runs into a stout and sclerotized ductus bursae. The lamella antevaginalis form two ear-like lappets (Fig. 9).
- After the ductus bursae a ventrally situated spiral (cervix) bears the origin of the ductus seminalis (Fig. 10).
- The bursa (Figs. 16-17) is smoothly enlarged, covered with alveolar sclerotizations and longitudinal folds. The cephal portion of the bursa is relatively small (only about 1/5 of the total length) and covered with small spines and pikes (Figs. 11, 17).

Distribution: Known only from western Africa.

Discussion

This paper is the clarification of the non-existence of any relationship between the *Catada*-complex and the genus *Focillopis*. Due to genitalic characters the author places the species provisionally in the Catocalinae. After the exclusion of two *Catada*-species the genus now remains monotypic.

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Zeitschrift/Journal: Quadrifina

Jahr/Year: 2001

Band/Volume: 4

Autor(en)/Author(s): Lödl Martin

Artikel/Article: Notes on the genus Focillopis HAMPSON, 1926 (Lepidoptera: Noctuidae: Catocalinae). 117-124