

SOME NEW ODONATE RECORDS FROM BURKINA FASO AND TOGO (WESTERN AFRICA) AND FROM THE ZAIRE-BURUNDI BORDER (EQUATORIAL AFRICA), WITH NOTES ON *TRITHEMIS JACKSONI* PINHEY

M. D'ANDREA*

Sezione Zoologica, Museo di Storia naturale "La Specola", Università di Firenze, Via Romana 17, I-50125 Firenze, Italy

Abstract – Annotated records are presented for 9 spp. *Brachythemis leucosticta* (Burm.) and *Palpopleura deceptor* (Calv.) are new for Burkina Faso (the former also for Burundi), while *Olpogastra lugubris* (Karsch), *Orthetrum saegeri* Pinhey, *Trithemis aconita* Lieft. and *T. jacksoni* Pinhey (previously known from the ♀ holotype only) are for the first time recorded from Togo.

Introduction

I have recently studied a small but interesting odonate collection from Burkina Faso, Togo (W Africa), Zaire and Burundi (Equatorial Africa). The limited number of specimens induced me to report the findings in a single note.

The material was collected in the following localities:

* Mailing address: Piazza S. Donato 23, I-52100 Arezzo, Italia

- (1) BURKINA FASO: around several broad shallow muddy artificial lakes near Ouagadougou (308 m, 12°20'N, 1°40'W); XI-1989 (morning), Massimo Forti & Roberto Giannatelli leg. The lakes, which have very sunny shores and abundant aquatic vegetation, are located in the midst of a savanna. The climate is presaharian.
- (2) BURKINA FASO: around a small spring- and rain-fed shallow lake near Sabou, 70 km SW of Ouagadougou, along the road from Ouagadougou to Bobo-Dioulasso (300 m, 12°N, 2°20'W); XI-1989 (afternoon), M. Forti & R. Giannatelli leg. The lake, which has sunny shores with water lilies and cane brakes, is in the midst of a treeless savanna.
- (3) TOGO: on Mount Agou, 15 km E of Kpalimé (Palimé) (986 m, 6°50'N, 0°40'E); 16-X-1989 (morning), M. Forti & R. Giannatelli leg. The mountain is completely covered by secondary forest. The specimens were collected in deep shade along a trail leading from the base to the summit. The valley below has several streams and canals.
- (4) TOGO: along a small river near Apédome, 10 km N of Kpalimé, 2 km W of Kpimé falls (150-200 m, 7°N, 0°40'E); X-1989 (morning and afternoon), M. Forti & R. Giannatelli leg. The river runs over a plateau and then drops down to the valley where it splits into several canals which run through degraded secondary forest with sunny and shady tracts.
- (5) BURUNDI: at Bujumbura on Lake Tanganyika (800-1000 m, 3°20'S, 29°15'E); I-VIII-1979, ex coll. I.R.S.I
- (6) ZAIRE: at Irangui near Bukavu (Costermansville) in the Kivu region (2000 m, 2°30'S, 28°50'E); 11-VII-1979, ex coll. I.R.S.I.

In parentheses are stated the altitude (m above sea level), locality coordinates and the time of collection (morning/afternoon). In the below text the localities are indicated by code-number (1-6), followed by the number and sex of specimens studied. The distribution of each species refers to that known prior to this paper. The specimens are in the collection of Dr Maurizio Pavesi (Museo Civico di Storia Naturale, Milano).

Abbreviations: abd: abdomen; – hw: hind wing; – arc: arculus; – ax: antenodal cross veins; – IH: inner hook.

List of recorded species

- *Chlorocnemis flavipennis* Selys: (3) 3 ♂.
- Guinea, Liberia, Sierra Leone, Togo. This species was recently synonymized with *C. nubilipennis* Karsch, 1893 and *C. nubilipennis rossii* Pinhey, 1969 (CARFÌ & D'ANDREA, 1994), since the chromatic variations are solely linked to the age of the individuals. The 3 males are relatively old: their wings are amber-colored and their body markings tend towards orange. The yellow frontal band is continuous in all the specimens.
- *Macromia bifasciata* (Martin): (6) 1 ♂.
- Southern and tropical Africa. This species and the very similar *M. nyanzana* can easily be mistaken for each other. However, three details identify our specimen as *bifasciata*, viz. its size (abd 45 mm, hw 41), which is smaller than the average size reported for *nyanzana* (see PINHEY, 1961), its postdiscoidal field with only one row of cells, and its color pattern which differs markedly from that of *nyanzana* (PINHEY, 1976). Previously thought to be limited to western Africa (the type localities are in Mali and Senegal), this species is apparently widespread in central and eastern Africa, as confirmed by PINHEY (1976), who transferred many specimens previously identified as *nyanzana* to *bifasciata*.
- *Brachythemis leucosticta* (Burmeister): (2) 2 ♂, 9 ♀; – (5) 2 ♂.
- New for Burkina Faso and Burundi. Continental Africa and European Mediterranean regions.
- *Olpogastra lugubris* (Karsch): (4) 1 ♂.
- New for Togo. Afrotropical region.
- *Orthetrum guineense* Ris: (4) 2 ♂, 1 ♀.
- Afrotropical region. One male has the arc of all four wings located between the first and second ax, a truly exceptional character. The other male is normal.
- *O. saegeri* Pinhey: (4) 1 ♂.
- New for Togo. Tropical central and western Africa.
- *Palpopleura deceptor* (Calvert): (1) 3 ♂, 1 ♀.
- New to Burkina Faso. Afrotropical region.
- *Trithemis aconita* Liefstinck: (4) 4 ♂.
- New for Togo. Afrotropical region.
- *T. jacksoni* Pinhey: (4) 2 ♀.
- New for Togo. Previously known only from Ivory Coast. These are important records since, aside from the type, they are the only known specimens of this species. Their morphology

perfectly matches PINHEY's (1970b) description, particularly in the typical "U"-shaped vulvar lip and color patterns (wings with smoky tips, pterostigma with a yellow posterior line, dark bands on the thorax). The two specimens are practically identical in size: abd. 18.5, hw 24.

T. jacksoni is not conspecific with the very similar *T. monardi* or *T. imitata*, as apparent from the shape of its vulvar lip. For this reason, the female from Sierra Leone, attributed to *T. monardi* by CARFI & D'ANDREA (1994), is correctly identified. This latter female (from Sierra Leone) is very similar to the subspecies *insuffusa* Pinhey, 1970, previously considered the northernmost (Zambian) form of this species. It has a hyaline wing apex and the anterior margin of the labrum faintly tinged with brown. Also its thoracic patterns are identical to those described by PINHEY (1970b, fig. 28a). Furthermore, several *T. monardi* males (carefully re-identified) have been reported from Sierra Leone (CARFI & D'ANDREA, 1994) and also from Cameroon (D'ANDREA & CARFI, 1995), extending the range of this species from western equatorial to southern Africa.

In PINHEY's (1970b) opinion, due to similarity with the females *monardi*, *imitata* and *aurora*, the species *jacksoni* could belong to his group 1 (*aurora-annulata*) and probably has males with red body, narrowed apex of the anterior lamina and well-curved hamules. Unfortunately, the similarity between closely related species is a problem which can be solved only by capturing copulating specimens. Pinhey further suggested that this species prefers reedy swamps. Indeed, our Togo specimens were taken at canals, with almost still water, abundant

aquatic vegetation and cane brakes (locality 2). The records from Ivory Coast and Togo suggest the occurrence of this species also in the countries neighboring the Gulf of Guinea, particularly in Ghana.

Acknowledgements – I am very grateful to Dr MAURIZIO PAVESI (Milano) for having allowed me to study the material in his collection. My thanks are also due to Professor SALVATORE CARFI (Acate) for suggestions and comments on the manuscript. Mr MASSIMO FORTI, one of the collectors of the present material, has kindly provided information on the collecting sites.

References – CARFI, S. & M. D'ANDREA, 1994, *Quad. Accad. naz. Lincei* 267: 111-191; – D'ANDREA, M. & S. CARFI, 1995, *Atti Mus. Stor. nat. Milano* 136(2): 41-77; – FRASER, F.C., 1951, *Bull. Inst. fr. Afr. noire (A)* 13: 1076-1092; – 1954, *Revue Zool. Bot. afr.* 49: 41-76; – KARSCH, F., 1893, *Berlin. ent. Z.* 38: 1-266; – 1898, *Ent. Nachr.* 24: 342-347; – PINHEY, E., 1961, *A survey to the dragonflies (order Odonata) of eastern Africa*, Br. Mus., London. – 1962a, *Publçoes cult. Co. Diam. Angola* 59: 1-161; – 1962b, *ibid.* 59: 165-320; – 1969, *Occ. Pap. rhod. Mus.* (B) 4(29): 209-260; – 1970a, *ibid.* 4(30): 261-321; – 1970b, *Mem. ent. Soc. sth. Afr.* 11: 1-159; – 1976, *Occ. Pap. rhod. Mus.* (B) 5(10): 524-601; – RIS, F., *Collns zool. Séllys Longchamps* 9-16: 1-1278; – SCHMIDT, E., 1951, *Mitt. muench. ent. Ges.* 41: 217-240; – TSUDA, S., 1986, *A distributional list of world Odonata*, preliminary edn, Tsuda, Osaka; – 1991, *A distributional list of world Odonata*, Tsuda, Osaka.

Received January 6, 1997