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African Tingidae, XLIII: On the genus *Dictyla* STÅL

(Insecta, Heteroptera)

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The recent revision of the euro-mediterranean Tingidae made by J. PÉRICART (1983) brought in our mind some questions concerning the complex *Dictyla* STÅL – *Cochlochila* STÅL – *Naochila* DRAKE – *Compseuta* STÅL.

The genera *Cochlochila, Naochila* and *Compseuta* are easily separated from each other. As we stated elsewhere (DUARTE-RODRIGUES, 1982a), the genera *Cochlochila* and *Naochila* differ from each other as follows: in *Cochlochila* the pronotal membranes do not extend forward on their bases to anterior margin of collar and the vein R+M of the hemelytra shows two tumid elevations, while in *Naochila* the pronotal membranes extend forward on their bases to anterior margin of collar and the vein R+M of the hemelytra shows only one tumid elevation at the apex of discoidal area. *Compseuta* is distinguishable from those two genera by the pronotal membranes very narrow uni- or biseriate and by the hemelytra without tumid elevations.

The separation between *Dictyla* and the three other genera of the complex, in which is concerned with the afrotropical fauna, is not so easy and the afrotropical species included now-a-days in the genus *Dictyla* form an heterogeneous group. This heterogeneity is revealed also by the study of the known fifth instar nymphs of the species forming this complex. Unfortunately our knowledge concerning the nymphs of the afrotropical species of *Dictyla* is still very reduced, not permitting to consider them in a revisional study. Nevertheless and in spite of the impossibility of doing now a revision of the genus *Dictyla*, we think that it will be useful to define the distinct groups of afrotropical species that can be recognized in that genus. This is the purpose of this paper. We will present also a key to the afrotropical and malagasy species in the genus *Dictyla*.

We can recognize six groups of *Dictyla* species in the afrotropical region:

1. The first group is formed by *Dictyla compressicollis* PÉRICART, *D. nassata* (PUTON), *D. picturata* (DISTANT) and *D. theroni* DUARTE-RODRIGUES; these species have the pronotal membranes broad, with outer edge never strongly arched and concave within, costal area of the hemelytra uniseriate or irregularly biseriate, subcostal area mainly triseriate, sometimes biseriate *(D. picturata)*, discoidal area long, reaching beyond middle of hemelytra, R+M without tumid elevations and forming with Cu an acute angle.

Only the fifth instar nymph of *D. nassata* is known; this species is distributed also in the euro-mediterranean region.

The species of this group are closely allied to the great majority of the euro-mediterranean species [*Dictyla platyoma* (FIEBER), *D. subdola* (HORVÁTH), *D. ruficeps* (HORVÁTH), *D. montandoni* (HORVÁTH), *D. convergens* (HERRICH-SCHAEFFER), *D. lupuli* (HERRICH-SCHAEFFER), *D. aridula* LINNAVUORI, *D. humuli* (FABRICIUS), *D. indigena* (WOLLASTON) and, of course, *D. nassata* (PUTON)].

2. The second group is formed by *Dictyla burgeoni* (SCHOUTEDEN) and *D. sjostedti* (HORVÁTH). Those two species show narrow pronotal membranes, with the outer edge strongly arched and concave within on pronotal disc, set far apart from lateral carinae, costal area of the hemelytra biseriate at base, then uniseriate, and biseriate again at the widest part, subcostal area triseriate, discoidal area long, surpassing the middle of hemelytra, R+M without tumid elevations and forming with Cu an acute angle.
It is known only the fifth instar nymph of *D. burgeoni*.
Those two species belong to the group of the following euro-mediterranean species: *Dictyla echii* (SCHRANK), *D. sima* SEIDENSTÜCKER, *D. lithospermi* RIBES, *D. triconula* (SEIDENSTÜCKER and *D. variabilis* DUARTE-RODRIGUES. The fifth instar nymph of *D. burgeoni* resembles those of *D. echii* and *D. variabilis* as well as those of *D. platyoma* and *D. lupuli*.

3. The third group includes *Dictyla dollingi* DUARTE-RODRIGUES, *D. imparis* (DRAKE), *D. nodipennis* (HORVÁTH) and *D. poecilla* DRAKE & HILL and is characterized by the R+M having two tumid elevations and forming with Cu an angle almost right and by the pronotal membranes not extending to median carina.
We know only the fifth instar nymph of *D. nodipennis*, which is similar to the fifth instar nymph of the euro-mediterranean species *D. convergens*, *D. humuli*, *D. nassata* and *D. rotundata* (HERRICH-SCHAEFFER).

This group is an heterogeneous group in which is concerned with the pronotal characteristics
a. *Dictyla nodipennis* and *D. poecilla* have broad pronotal membranes, covering lateral carinae on pronotal disc.
b. *Dictyla dollingi* has narrow pronotal membranes with outer edge arched and concave within on pronotal disc and short lateral carinae not extending anteriorly to middle of pronotal disc.
c. *Dictyla imparis* is similar to the species of the second group concerning the shape of pronotal membranes but has long lateral carinae, extending anteriorly to calli; this species is atypical in this last aspect because the great majority of the euro-mediterranean and afrotropical species has short lateral carinae not extending anteriorly to calli.
The situation of those species in the genus is problematic. *D. poecilla* and *D. nodipennis* seem closer to the european species *D. rotundata;* but *D. imparis* and *D. dollingi* have no close relatives in the euro-mediterranean region.

4. This group is formed only by *Dictyla tuberosa* (HORVÁTH). This species, like those of the last group, has two tumid elevations on the R+M but the pronotal membranes are broad, inflated and with the outer edge touching anteriorly the median carina and then diverging posteriorly so as to rest on the dorsal edge of lateral carinae.
The fifth instar nymph of *D. tuberosa* is not known.
This species resembles the species of the genus *Cochlochila* STÅL, particularly those of the subgenus *Cochlochila (Kibongoto)* DUARTE-RODRIGUES.

5. This fifth group is formed only by the species *Dictyla pongana* (DRAKE). This species is largely atypical in the genus. The hemelytra have a very broad costal area, triseriate at base and then biseriate, turned downwards and concealing the abdomen at lateral view, R+M with two high tumid elevations and forming an obtuse angle with Cu, discoidal area partially divided in two by an oblique vein borning in the R+M in front of anterior tumid elevation more or less at the middle length of discoidal area, outer margin and veins of hemelytra with short spines.
We do not know the nymphs of this species.

6. In this last group we find the remaining eleven species *Dictyla abyssinica* (DRAKE), *D. aurigana* (DRAKE), *D. australis* DUARTE-RODRIGUES, *D. collarti* (SCHOUTEDEN), *D. femoralis* (STÅL), *D. flavipes* (SIGNORET), *D. gerardi* (SCHOUTEDEN), *D. litotes* DRAKE & HILL, *D. schoutedeni* DUARTE-RODRIGUES, *D. senegalensis* DUARTE-RODRI-

GUES and *D. uniseriata* (HORVÁTH). Those species are characterized by the pronotal membranes broad, usually with outer margin touching median carina, hemelytra with costal area uniseriate, subcostal area biseriate, R+M with only one tumid elevation (sometimes absent) at the apex of discoidal area where it forms with Cu an angle almost right, discoidal area not reaching to middle of hemelytra.

We know only the fifth instar nymphs of *D. flavipes* and *D. uniseriata;* they resemble the nymphs of *Naochila boxiana* (DRAKE) and *N. miongavensis* DUARTE-RODRIGUES in the peculiar shape of the spiniform processes and the absence of a spiniform process on the lateroposterior angles of the urite VII.

This group of species will be transferred very probably in the next future to the genus *Naochila*, that will need then to be redefined; we will need first to know better the nymphs of the other nine *Dictyla* species as well as those of the remaining sixteen species of *Naochila* or, at least, the nymphs of the majority of all those species to know if the larval characteristics are constant characters within the genus *Naochila*.

Key to the afrotropical species of *Dictyla* STÅL

1. Hemelytra with R+M without tumid elevations; discoidal area long, extending beyond middle of hemelytra; R+M and Cu forming an acute angle at the apex of discoidal area. 2
   Hemelytra usually with R+M with one or two tumid elevations; if R+M without tumid elevations then discoidal area short, not reaching to middle of hemelytra; R+M and Cu forming an angle almost right at the apex of discoidal area. 7
2. Pronotal membranes broad, covering lateral carinae or only slightly apart from lateral carinae; head with three or five dorsal spines.
   Pronotal membranes narrow, with outer edge arched and concave within on pronotal disc and set far apart from lateral carinae; head without spines. 6
3. Pronotal membranes not reaching to median carina; head with three dorsal spines. 4
— Pronotal membranes touching median carina; head with five dorsal spines.
4. Pronotal membranes with a lateroanterior depression each.
   Dictyla compressicollis PÉRICART
— Pronotal membranes without any depression. **Dictyla nassata** (PUTON)
   Pronotal membranes rounded, with two small depressions.
   Dictyla theroni DUARTE-RODRIGUES
— Pronotal membranes with a longitudinal crest each. **Dictyla picturata** (DISTANT)
6. Posterior femora mainly black. **Dictyla burgeoni** (SCHOUTEDEN)
— Posterior femora testaceous. **Dictyla sjostedti** (HORVÁTH)
7 Hemelytra with R+M with two tumid elevations. 8
— Hemelytra with R+M without tumid elevations or with only one tumid elevation. 13
8. Discoidal area partially divided in two by an oblique vein; costal area broad, triseriate at base and then biseriate; outer margin and veins of hemelytra with small spines.
   Dictyla pongana (DRAKE)
— Not as stated above. 9
9. Pronotal membranes touching anteriorly median carina and then diverging posteriorly with outer edge resting on dorsal edge of lateral carinae. **Dictyla tuberosa** (HORVÁTH)
— Pronotal membranes set apart from median carina. 10
10. Pronotal membranes broad, covering lateral carinae on pronotal disc. 11
— Pronotal membranes narrow, set far apart from lateral carinae. 12
11. Costal area uniseriate at base; outer edge of pronotal membranes not close to median carina. **Dictyla nodipennis** (HORVÁTH)
— Costal area biseriate at base; outer edge of pronotal membranes close to median carina.
   Dictyla poecilla DRAKE & HILL
12. Lateral carinae long, extending anteriorly to calli; costal area biseriate at base and at widest part. **Dictyla imparis** (DRAKE)

Lateral carinae short, not reaching to middle of pronotal disc; costal area uniseriate. **Dictyla dollingi** DUARTE-RODRIGUES

13. Pronotal membranes set apart from median carina. **Dictyla uniseriata** (HORVÁTH)
Pronotal membranes touching median carina, at least on anterior part of pronotal disc. 14

14. Pronotal membranes inflated, not resting on pronotal surface. **Dictyla gerardi** (SCHOUTEDEN)

— Pronotal membranes completely turned over the pronotum and resting on pronotal surface. 15

15. Collar produced in front forming a small hood and covering base of head. 16
Collar truncate in front or only slightly produced in front. 19

16. Pronotal membranes with a longitudinal furrow between a longitudinal dorsal crest and a laterodorsal crest. **Dictyla collarti** (SCHOUTEDEN)
Pronotal membranes rounded above. 17

17 Larger species (3,59 mm). **Dictyla schoutedeni** DUARTE-RODRIGUES
Smaller species (less than 3,30 mm). 18

18. Pronotal membranes with large areolae; posterior femora testaceous. **Dictyla australis** DUARTE-RODRIGUES

— Pronotal membranes with small areolae; posterior femora with a large blackish band. **Dictyla aurigana** (DRAKE)

19. Posterior femora mainly blackish. **Dictyla femoralis** (STÅL)
Posterior femora testaceous. 20

20. Head with three dorsal spines. **Dictyla senegalensis** DUARTE-RODRIGUES

— Head with five dorsal spines. 21

21. Antennae with segment III small (less than 0,60 mm). **Dictyla litotes** DRAKE & HILL
Antennae with segment III long (more than 0,75 mm). 22

22. Posterior pair of spines on the head long, reaching the level of anterior margin of eyes. **Dictyla abyssinica** (DRAKE)

— Posterior pair of spines on the head short, not extending to the level of middle length of eyes. **Dictyla flavipes** (SIGNORET)

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