ISSN 0523-7904

BOCAGIANA

Museu Municipal do Funchal

Madeira 10.3.1992 No. 155

PRESENCE OF *DIOPLOSYLLIS OCTODENTATA* PERKINS, 1981 (POLYCHAETA: SYLLIDAE: EUSYLLINAE) AT THE COASTS OF THE CANARY ISLANDS

by J. NÚÑEZ * & G. SAN MARTÍN **

(With 2 figures)

ABSTRACT: From material collected at Ensenada de los Abades (Tenerife), the species *Dioplosyllis octodentata* PERKINS, 1981 is recorded for the first time from the Canary Islands. The four specimens studied are described, giving new anatomical and taxonomical data. Likewise, this species is compared with others belonging to the same genus.

RESUMO: PRESENÇA DE *DIOPLOSYLLIS OCTODENTATA* PERKINS, 1981 (POLYCHAETA: SYLLIDAE: EUSYLLINAE) NAS COSTAS DAS ILHAS CANÁRIAS. Dioplosyllis octodentata PERKINS, 1981 foi encontrada pela primeira vez em Canárias, proveniente de material recolhido na Ensenada de los Abades. São descritos os quatro espécimes encontrados para os quais são dados novos dados anatómicos e taxonómicos. É também feita uma comparação entre esta espécie e outras espécies congéneres.

* Departamento de Biología Animal (Zoología), Facultad de Biológicas, Universidad de La Laguna, 38206 La Laguna, Tenerife, Canary Islands.

** Departamento de Biología, Unidad de Zoología, Facultad de Ciencias, Universidad Autónoma de Madrid, Canto Blanco, 28049 Madrid (Spain)

INTRODUCTION

Some five species of the genus *Dioplosyllis* GIDHOLM, 1962 (Syllidae: Eusyllinae) have been described, all of them being little known but having occasionally been cited for worldwide distribution. This singular genus of Syllids is characterized by presenting extremely long dorsal cirri, the appearance of these annelids thus having more that of a Cirratulid than of a Syllid.

In larg-grained sand samples (a mixture of black basaltic and organogenous sand) recently collected (October, 1990) in a locality of South Tenerife, four specimens of *Dioplosyllis octodentata* PERKINS, 1981 were collected whose identity could be confirmed on comparing them with two paratypes from Floridian waters, the type locality of the said species, only known until recently from that site.

The thorough study of the Canarian specimens has revealed some details of their anatomy that had not previously been described. These contributions, together with the fact that they belong to a genus new to the fauna of this Archipelago, led us to produce the present paper.

MATERIAL AND METHODS

The material examined was collected at Ensenada de los Abades (Tenerife), at a depth of 5 m at the foot of a cliff, above a rocky bottom with small sandy areas. The samples were collected by direct methods, with light diving equipment. Two of them were preserved in alcohol 70%, while the other two were mounted in glycerine jelly, together with podia and a pharynx after dissection of one of the specimens. Further details of the methodology employed are given in NUÑEZ (1991). The material is deposited in the private collections of the Authors, JN and GSM.

Family Syllidae GRUBE, 1850
Subfamily Eusyllinae RIOJA, 1925
Genus *Dioplosyllis* GIDHOLM, 1962
Dioplosyllis octodentata PERKINS, 1981
(Figs. 1 & 2)

PERKINS (1981): 1087-1090, fig. 4.

Description. Body fragile, relatively short and wide, opaque whitish in colour. The largest specimen lacks the far posterior end, measuring 8 mm in length, 0.5 mm in width at the proventricular level, excluding parapodia and setae and bearing 40 setigers.

Prostomium rounded, with two pairs of eyes in trapezoidal arrangement; three very long antennae, readily detached; the two palps long, wide and separated (Fig. 1 B). Two pairs of long tentacular cirri detached, as also occurs with the antennae. Dorsal cirri very long, frequently coiled and intertwined, entangled on dorsum (Fig. 1 A). Parapodia elongated and slender. Ventral cirri long and digitiform.

Compound setae falcigerous heterogomph, long shaft ending in deep cleft and subdistally thicker, with short spines. Blades with spinose inner margin; the spines are long at base and short distally, all directed upwards. The tip of the blade is bidentate, with the teeth situated on different planes, one somewhat oblique compared with the other, the proximal tooth being more strongly curved and hooked than the distal one; in the more dorsal setae a third tooth appears intercalated between the former two, difficult to observe and only visible from a suitable perspective (Fig. 2 E,F). The anterior segments present 9-10 setae for each parapodium, decreasing progressively to only 6 in the posterior ones. The dorso-ventral gradation in the length of the blades is little marked, 30 μm in the upper dorsal and 20 μm in the lower ventral, in a middle parapodium. Anterior parapodia with two thick aciculae, a truncated tip and provided with spinules (Fig. 2 C), accompanied in some cases by a similar, thinner, third aciculum; in the last posterior parapodia the aciculae project to almost half the length of the shaft of the compound setae, giving the impression of simple setae (Fig. 2 A,E). In the last parapodium appears a solitary dorsal simple seta, straight, thin, slightly bidentate and with short subdistal spinules (Fig. 2 G).

Digestive tube scarcely visible because of transparency. The pharynx extends through six to seven segments; the pharyngeal tooth is large, situated somewhat removed from anterior margin, carrying a series of seven small teeth situated on the ventral margin of the pharyngeal opening (Fig. 2 B). Rectangular proventriculus, through about four to five setigers, with about 45 little defined muscle cell rows.

Remarks. The specimens from the Canary Islands coincide well with the description of *D. octodentata* PERKINS (1981), confirmed upon examination of two paratypes of this species. In the original description, no mention is made of the fact that some of the posterior aciculae may protrude considerably from the parapodium, this characterstic lacking in importance since it is not found in all the specimens. The number of small teeth surrounding the ventral part of the pharyngeal anterior margin may vary since, in some specimens, an additional tooth, although not clearly defined, appears to be present.

Taking as reference the work of MUELLER & FAUCHALD (1976), in which a table is presented with the most relevant characters of the species of *Dioplosyllis* known until the present time, the shape of the shaft of the setae in *D. octodentata* being similar to those of *D. broadi* MUELLER & FAUCHALD, 1976, but the blades

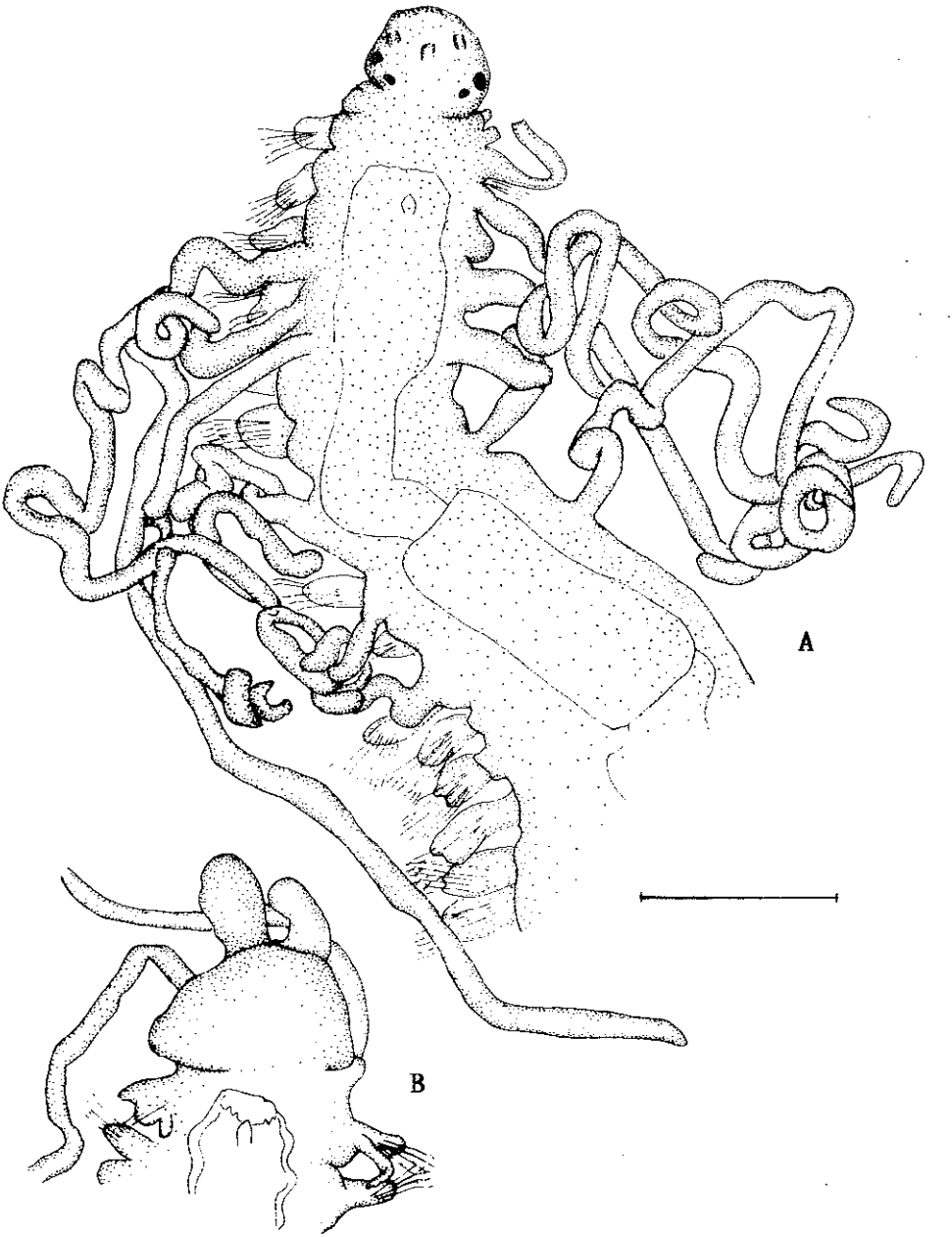

Fig. 1- *Dioplosyllis octodentata*: A, anterior end, dorsal view; B, anterior end, ventral view. Scale bar 0.25 mm

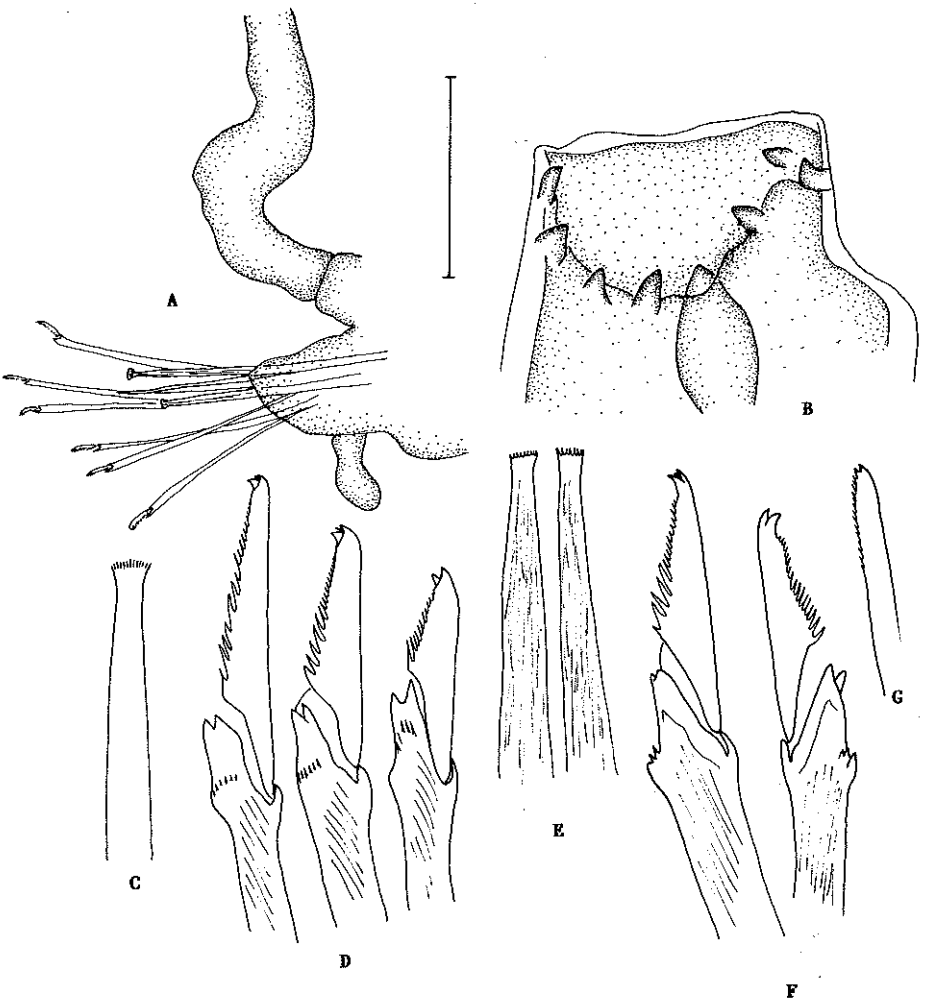

Fig. 2- *Dioplosyllis octodentata*: A, posterior parapodium; B, anterior margin of the pharyngeal; C, acicula, anterior parapodium; D, compound setae, anterior parapodium; E, aciculae, posterior parapodium; F, compound setae, posterior parapodium; G, dorsal simple seta. Scale bar A, 0.13 mm; B, 64 μm; C,D,E,F,G, 20 μm.

being quite different. From the biogeographical point of view, the closest species is *D. cirrosa* GIDHOLM, 1962, cited from the Atlantic coast of France (GIDHOLM, 1962) and from the Bay of Biscay and the Mediterranean (CAMPOY, 1982); the shape of the parapodia and aciculae is almost identical, but the setae of *D. cirrosa* present shafts with a less cleft tip, the blades being different and having five small teeth on the ventral anterior margin of the pharyngeal.

Distribution. Florida, Canary Islands.

ACKNOWLEDGEMENTS

We are grateful to Dr. THOMAS H. PERKINS, Florida Department of Natural Resources, U.S.A., for the loan of two paratypes that have allowed us to confirm our identification of the species.

REFERENCES

CAMPOY, A.:

1982. *Fauna de España. Fauna de Anélidos Poliquetos de la Península Ibérica*. EUNSA (Ediciones de la Universidad de Navarra, S.A.), 781 pp.

GIDHOLM, L.:

1962. Sur quelques Polychètes Syllidiens des sables de la région de Roscoff avec description de deux nouvelles espèces. *Cah. Biol. Mar.*, **3**: 249-260.

MUELLER, G.J.& K. FAUCHALD.:

1976. A new species of *Dioplosyllis* (Polychaeta: Syllidae)from California. *South. Calif. Acad. Sci.*, **75**(1): 19- 22.

NUÑEZ, J.:

1990. *Anélidos Poliquetos de Canarias: Estudio sistemático de los órdenes Phyllodocida, Amphinomida y Eunicida*.Tesis Doctoral (Resumen). Secretariado de Publicaciones, Universidad de La Laguna, 54 pp.

PERKINS, T.H.:

1981. Syllidae (Polychaeta), principally from Florida, with descriptions of a new genus and twenty-one new species. *Proc. Biol. Soc. Wash.*, **93**(4): 1080-1172.

Received 3.2.1992