

First record of *Chloronia antilliensis* Flint, 1970, in Guadeloupe (Megaloptera, Corydalidae)

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(Accepté le 7.IX.2022 ; publié en ligne le 20.IX.2022)

Abstract. – Recently detected in Martinique, *Chloronia antilliensis* Flint, 1970, is known from Dominica and Saint Lucia islands. During an entomological survey for a diachronic study of some insects' families in the south of the Parc National de Guadeloupe, a female of this species was observed. It is confirmed that this endemic species of Eastern Caribbean Islands is related to the wetlands of mountain areas.

Résumé. – Premier signalement de *Chloronia antilliensis* Flint, 1970, en Guadeloupe (Megaloptera, Corydalidae). Récemment détectée en Martinique, *Chloronia antilliensis* Flint, 1970, est connue de la Dominique et de Sainte-Lucie. Durant un inventaire entomologique dans le cadre d'une étude diachronique des populations de certaines familles d'Insectes dans le sud du Parc national de Guadeloupe, une femelle a été observée. Il est confirmé que cette espèce endémique de la Caraïbe orientale se développe dans les milieux humides des massifs montagneux.

Keywords. – Faunistics, Eastern Caribbean Islands, Antilles, mountain area, new record.

Chloronia antilliensis has been described by FLINT (1970) from Dominica Island. Later, PENNY & FLINT (1982), FLINT (1992), and CONTRERAS-RAMOS (1995, 1999) provided additional information on this genus of Megaloptera in tropical America and the Antilles. PENNY (1977) listed this species only from Dominica Island as the distribution of the species in the Antilles. MEURGEY (2011) indicated that he had information on this species in Guadeloupe from Mr. J. Bonfils without published data. Then, MEURGEY (2019) mentioned the year 1968 as citation of Bonfils, but without a link to a reference. Finally, MEURGEY & RAMAGE (2020) no longer reported *Chloronia antilliensis* from Guadeloupe and concluded that the order is absent on this island. More recently, DUMBARDON-MARTIAL *et al.* (2018) cited the species for the first time from Martinique. *Chloronia antilliensis* is recognized based on coloration and male genitalia morphology; conversely, the female genitalia have not been described or illustrated for any species. MARTINS *et al.* (2022) do not cite recent references to this species in the Antilles, apart from the original publication by FLINT (1970). The supposed presence of *C. antilliensis* in Guadeloupe is indicated without published reference. DALTRY (2009) indicated that the species is sensitive to the quality of the water where the larvae develop in St Lucia Island. In 2018, DUMBARDON-MARTIAL *et al.* noted that the species is very little observed unlike the many data from Dominica Island, which allowed the description of the species.

MATERIAL AND METHODS

As part of a diachronic study of the populations of some families of insects in the south of the Parc National de Guadeloupe, a light trap was installed during two periods (wet and dry seasons) near Grand-Etang (fig. 2) (Capesterre-Belle-Eau; 16.029233, -61.627293; alt. 430 m) to compare with the observations made in 1997 (SAUTIÈRE, 1999). The device used consists

of a white vertical sheet with one 250 W lamp, powered by a generator. The light trap was performed on 7.IV.2022 between 6:30 p.m. and 11:00 p.m.

Additionally, INRAE insect collections in Guadeloupe were visited.

RESULTS

An adult female of Megaloptera was attracted to the light around 10:30 p.m (fig. 1). Large and of remarkable appearance with its general yellow color and blackish spots, its presence did not escape. I have already observed an individual at Morne Bellevue, during a light trap in Martinique the 1.X.2021, at an altitude of 615 m.

Five female specimens of Megaloptera were found in INRAE collections, with the following locality data. GUADELOUPE: 1 ♀, CRA (ex. INRAE), Duclos, piège lumineux, 11.XII.1955, N° INRAE 1874, *A. Bessard leg.*; 1 ♀, Petit-Bourg, Vernou, piège lumineux, II.1963, N° INRAE 1876, *J. Bonfils leg.*; 2 ♀, Sofaïa, 1.IV.1968, N° 1875 & 1877, *A. Delplanque leg.*; 1 ♀, Duclos, piège lumineux, 26.III.1971, N° INRAE 1878, *A. Delplanque leg.*

After comparison with the original description and the specimens from Martinique, the identity as *Chloronia antilliensis* was corroborated.

DISCUSSION

The location of the observations of this species of Megaloptera in Guadeloupe and Martinique confirms its preference for high altitude environments in humid forest, as indicated by FLINT (1970) for Dominica Island. This species is sensitive to the quality of the water where its larva develops; indeed, the observations have become rare since the 1950s and 1960s while survey efforts to study insects in the French Antilles have never been greater. Some of the strongest threats to megalopteran larvae are pollution, eutrophication, and other forms of freshwater and riparian habitat degradation, because of unregulated human population growth (RIVERA-GASPERÍN *et al.*, 2019). All the watersheds of Guadeloupe are contaminated with chlordcone (ROCHETTE *et al.*, 2017), a problem also present in Martinique (COAT *et al.*, 2006). It would be interesting to barcode the specimens encountered in Dominica, Guadeloupe and Martinique to confirm their grouping into a single species. The presence of *Chloronia antilliensis* at St Vincent Island, cannot be excluded. Specific surveys near lakes, ponds, or large rivers would be necessary.



Fig. 1. – *Chloronia antilliensis* Flint, 1970, female from Guadeloupe (2022, April 7th).



Fig. 2. – *Chloronia antilliensis* Flint, 1970, biotope, Grand-Etang, Guadeloupe. (Photograph N. Moulin).

ACKNOWLEDGMENTS. – Field surveys were partly supported by Parc National de Guadeloupe (convention N°2021-22). I thank Virginie Séné, Sophie Bedel and Barthélémy Dessanges of the Parc National de Guadeloupe, and Toni Jourdan to check in the INRAE collections with permission of Anne-Marie Toussaint.

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