

THE OCCURRENCE OF *OXYCARENUS HYALINIPENNIS*
(COSTA) (HEMIPTERA: LYGAEIDAE) IN THE WEST INDIES
AND NEW LYGAEIDAE RECORDS FOR THE TURKS AND
CAICOS ISLANDS OF PROVIDENCIALES AND NORTH CAICOS

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ABSTRACT

A breeding population of *Oxycareus hyalinipennis* (Costa) is reported for the first time from the West Indies. Its distribution is discussed and information to distinguish it from other closely related species is given. Several additional lygaeids are reported for the first time from the islands of North Caicos and Providenciales.

Key Words: Cotton, introduced, West Indies, Caicos Islands.

RESUMEN

Se reporta por primera vez en las Indias Occidentales una población reproductiva de *Oxycareus hyalinipennis*. Se discute su distribución y se brinda información con el fin de distinguir esta especie de otras especies relacionadas. Se reportan por primera vez varias especies adicionales de lygaeidos en las islas de Caicos del Norte y Providenciales.

The cotton seed bug, *Oxycareus hyalinipennis* (Costa), is a common and widespread species in the Old World tropics. It extends from the European side of the Mediterranean throughout Africa where it has frequently been reported as injurious to cotton. Samy (1969) stated that it is a cosmopolitan species "occurring in the Palearctic, Oriental and Neotropical regions." It is not entirely accurate to state that it is cosmopolitan as it is unknown in the Nearctic Region and, as will be discussed below, is introduced in the Neotropics.

In Africa, it is an abundant widespread species and often causes staining of cotton. The intensive study by Kirkpatrick (1923) remains the definitive work. Kirkpatrick and other workers have listed a long series of plants upon which *O. hyalinipennis* has been found (see Slater 1964), but breeding records appear to be largely restricted to plants of the order Malvales. Samy (1969) summarized this literature asserting that probably the true host plants are confined to species of Malvaceae, Sterculiaceae and Tiliaceae. He mentioned the following genera: *Abutilon*, *Cola*, *Eiodendron*, *Gossypium*, *Malva*, *Sphaeralcea*, *Hibiscus*, *Pavonia*, *Sida*, *Dombeya*, *Sterculia* and *Triumfetta*.

In the summer of 1991, the junior author and his wife collected on North Caicos five nymphs of a lygaeid under a species of *Pluchea* (Asteraceae) that they had not previously seen in the West Indies. Despite several hours of assiduous ground searching and sweeping in the same area on subsequent days, no additional specimens were taken. No malvaceous plants were evident in the immediate area. These specimens subsequently molted into adults and proved to be *O. hyalinipennis*. On another collecting trip to North Caicos, one adult of *O. hyalinipennis* was collected on wild cotton within 1 km of the previous find. More recently *O. hyalinipennis* was collected at Clarence Town, Long Island, Bahamas.

These records represent the first known breeding populations of this potentially destructive insect in the West Indies. Although Henry et al. (1983) indicated that *O. hyalinipennis* had been intercepted at a U.S. airport on a citrus leaf in baggage from the Dominican Republic, plus a number of additional interceptions at U.S. ports of entry, the above record is the only one that could possibly have originated from a Western Hemisphere source.

Oxycarenus hyalinipennis has been established in South America for many years. Although Samy (1969) claimed a cosmopolitan distribution, there is no doubt that this species is an introduced member of the Neotropical lygaeid fauna. The genus *Oxycarenus* is a large and diverse one in the Old World tropics (approximately 50 species of which at least 33 are Ethiopian) but, other than *O. hyalinipennis*, is not known to occur in the Western Hemisphere. *Oxycarenus hyalinipennis* was present in Brazil as early as 1917 (Costa Lima, 1922). Kormilev (1950) summarized the history of the species in the Western Hemisphere. Costa Lima (1940) stated that specimens were taken in northeastern Brazil in 1917 on "lagarta rosa" and that there were records of damage to cotton bolls. Slater (1964) listed published records for Argentina, Paraguay, and Bolivia, as well as Brazil.

It is, therefore, not surprising that this common and mobile species should appear in the West Indies, but it is surprising that the first record should come from the small island of North Caicos. This suggests that although we have not collected it in our rather extensive surveys on many islands in the West Indies, it will eventually prove to be more widespread in the islands.

There are several closely related species of *Oxycarenus* that can readily be confused with *O. hyalinipennis* and several of these feed on Malvaceous plants. To aid in accurate identification of this species, the following comments are included to enable others workers to readily separate it from closely related species that have black heads and pronota and pale colored hemelytra. Several species, such as *O. albidipennis* Stal., *O. pallidipennis* (Dallas) and *O. congoensis* Samy, may readily be recognized by the orange-red coloration of the first five abdominal segments. Samy (1969) described the species *O. nigricornis*, which he listed as widespread in Africa. He separated it from *O. hyalinipennis* because the antennae of this species were completely black whereas he believed *O. hyalinipennis* always had pale second antennal segments. Slater (1972) synonymized *O. nigricornis* with *O. hyalinipennis* stating that the antennal coloration of *O. hyalinipennis* is variable within populations and ranges from completely black through shades of dark brown to almost completely pale. *Oxycarenus bokalae* Samy is the species most likely confused with *O. hyalinipennis*. Both are similarly colored, but *O. hyalinipennis* has the clavus either completely or in large part pale testaceous to white, whereas in the clavus, *O. bokalae* is almost uniformly dark brown to black. The pygophore opening also differs in the two species. In *O. bokalae* the opening is broad with the side margins arcuate and triangularly tapering to a sharply or bluntly pointed distal end whereas in *O. hyalinipennis* the pygophore opening tapers evenly to a triangular point. Slater (1972) figured both conditions. It

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should be noted that, despite its relatively recent description, *O. bokalae* is also widely distributed in Africa and has been reported from cotton (Samy, 1969).

The following Lygaeidae are new records for the North Caicos and Providenciales Islands.

North Caicos:

Ochrinnus laevus Brailovsky.

Paromius longulus (Dallas).

Oedancala cladiumicola Baranowski & Slater.

Craspeduchus pulchellus (F.)

Ozophora umbrosa Slater (previously reported from West and South Caicos (Slater, 1987)).

Pseudopachybrachius vinctus (Say).

Nysius raphanus Howard.

Providenciales:

Ochrinnus laevus Brailovsky.

Oncopeltus fasciatus (Dallas).

Ozophora divaricata Barber.

Pseudopachybrachius basalis (Dallas).

Craspeduchus pulchellus (F.)

Lygaeus bahamensis Barber & Ashlock (previously reported by Barber and Ashlock (1960), from South and West Caicos).

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