Development of the Blowfly *Hemipyrellia fernandica* (Macquart) (Diptera: Calliphoridae) in a Carcass of the Giant Dung Beetle *Heliocopris antenor* (Olivier) (Coleoptera: Scarabaeidae) in Uganda

The blowfly *Hemipyrellia fernandica* (Macquart) is distributed throughout the Afrotropical Region, being found generally south of the Sahara Desert from Liberia to Sudan, Uganda, and Tanzania, and south to South Africa (Townsend 1918, Aubertin 1931, Lewis 1955, Zumpt 1959, Lindner 1962, Kurahashi and Kirk-Spriggs 2006). It is often very common, and Kurahashi and Kirk-Spriggs (2006) stated that the species is frequently mistaken for *Lucilia cuprina* (Wiedemann) or *L. sericata* (Meigen).

We here report an unusual observation on *H. fernandica* in the town of Soroti, Uganda (N1°43'04" E33°37'25"). Specimens were reared from eggs laid May 17, 2010 on the carcass of a female giant dung beetle, *Heliocopris antenor* (Olivier), which had been attracted to a porch light. The fly larvae exited the carcass and pupated May 26, 2010, and four adults emerged on June 1, 2010. The adults were identified using Aubertin (1931). The first author also observed *H. fernandica* elsewhere throughout southeastern and central Uganda, collecting or observing specimens in the towns and villages of Entebbe, Iganga, Kampala, Lira, Ngora, and Serere. All specimens are retained in the senior author’s personal collection.

*Hemipyrellia fernandica* is an oviparous species known to breed in both feces and decomposing animal carcasses (Cuthbertson 1933, Zumpt 1956, Disney 1973) and to cause facultative myiasis in vertebrates (Zumpt and Ledger 1967). Most of the carrion host species include small vertebrates, such as lizards, birds, mice, and snakes, but it has been found in larger carrion, such as sheep, cows, and humans. It has not been reported previously from any kind of arthropod carrion.

The fly eggs were laid between the posterior margin of the pronotum and the anterior margin of the elytra on the beetle, but other locations may have been used as well. Time from oviposition to pupation was nine days, while the pupal stage lasted six days at ambient temperatures. Records at the Soroti airport (International Civil Aviation Organization code HUSO) indicated that the range of ambient air temperatures between 7:00 A.M. and 3:00 P.M. on the days between May 16 to June 2, 2010 was 20 to 28 °C (www.wunderground.com); however, air temperatures in town were actually up to 7 °C warmer than those reported at the airport. As would be expected, there were no gross external morphological changes to the beetle carcass observed as a result of the blowfly development, although a strong odor of decomposition was present and may have facilitated the attraction to the flies. Many other live and dead *H. antenor* were observed in the same locality, but no additional specimens were found to be infested with calliphorid larvae.

*Heliocopris antenor* is widely distributed from Senegal to Democratic Republic of the Congo and Zimbabwe, and in Ethiopia and Eritrea, but has not been reported from Uganda in either the recent monograph on the genus by Pokorny et al. (2009), used for identification of the beetle, or in Ferreira’s (1972) catalog of
Afrotropical Scarabaeinae. We could not trace any previous records of *H. antenor* from Uganda, although its presence 550 km northwest of Soroti in the Parc National de la Garamba of the Democratic Republic of the Congo (Ferreira 1962) and Kolbe’s (1898) record southeast of Lake Victoria in Tanzania had indicated its likely occurrence in the country. This report stands as a new country record for *H. antenor* in Uganda.

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**Literature Cited**


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