

SHORT COMMUNICATION

## Flies (Calliphoridae, Muscidae) and Beetles (Silphidae) from Human Cadavers in Cali, Colombia

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*Adult specimens of Cochliomyia macellaria, Chrysomya megacephala, Ch. rufifacies, Lucilia sp. (Calliphoridae), Musca domestica (Muscidae), Oxelytrum discicolle (Silphidae) and Sarcophagidae were recovered from 12 human cadavers in Cali, Valle, Colombia. Information regarding these findings is presented.*

Key words: *Chrysomya rufifacies* - *Chrysomya megacephala* - *Oxelytrum* - forensic entomology - Colombia

Identifications of insects associated with human cadavers are relatively few in the literature of the Neotropical region. Dunn (1916) reported *Hermetia illuscens* (L.), a stratiomyid in Panama; Pessôa and Lane (1941) presented previous records and reviewed necrophilous Scarabaeidae from museums in Brazil; Jirón (1979), Jirón et al. (1983), Jirón and Solano (1988) gave information on Calliphoridae, Sarcophagidae, Muscidae and Stratiomyidae of Costa Rica; and Carvalho et al. (2000) identified arthropods associated with pig carrion and human corpses in Campinas, State of São Paulo, Brazil. Recently, some experimental studies of forensic entomology have been carried out in different regions of Colombia (Idrobo & Martínez 2000, Restrepo et al. 2000, Wolff & Uribe 2000). In Cali (3°26'N, 76°31'W, 1,000 m), Olaya (1999) determined the arthropod succession and the rates of decomposition in dogs, but apparently no specific identifications of insects found on human bodies have been published.

During different months of 1990 and 1991 insects found on 16 human cadavers (14 men, 2 women) were collected at the Cali Institute of Legal Medicine. The human bodies were in early stages of decomposition (fresh or bloat) and they were found in urban and rural areas of the city, on empty grass or bush fields. The victims, fully-clothed or half naked, had bullets and/or stab wounds, and some were strangled. The insects captured were preserved in alcohol and some were pinned, later in the entomology laboratory. The identifications of the Calliphoridae were made with the work of Dear (1985); diagnoses of these and some other flies were confirmed by Dr B Greenberg (University of Illinois at Chicago). Specimens were deposited in the Arthropod Reference Collection of the Departamento de Microbiología, Facultad de Salud, Universidad del Valle.

A total of 70 adult insects were collected from 12 human bodies; the other 4 corpses contained only larvae and/or eggs of flies. The species and number of adult insects recovered are given in the Table. Also, 2 female Sarcophagidae were obtained from one cadaver, fly larvae and eggs were present on 11 and 5 cadavers, respectively.

The Calliphoridae included *Chrysomya megacephala* (F.) and *Ch. rufifacies* (Macquart), species that arrived in South and Central America from Africa and the Australasian region, respectively (Baumgartner & Greenberg 1984). Both species have been recorded in North America (Greenberg 1988) and were also found on dogs carcasses in the study of Olaya (1999).

The dispersion of the *Chrysomya* species from Brazil and Costa Rica to the north has been more studied than the movement of *Ch. rufifacies* to the south (Baumgartner 1993). Besides the record of two specimens of this species by Mariluis and Schnack (1989) in Buenos Aires, Argentina, no further information has been obtained in South America. The present records from Cali are apparently the first for Colombia. This species was the most abundant on the human cadavers examined, but the proportion of the native *Cochliomyia macellaria* (F.) was also high, indicating a less severe competition than in other areas (Baumgartner & Greenberg 1985) or experimental works (Wells & Greenberg 1992a,b). More field controlled studies are necessary to confirm these preliminary observations and to establish basic forensic entomology information at Cali.

### ACKNOWLEDGMENTS

To Dr JL Arredondo for collecting some of the specimens, and to Dr B Greenberg for identification of material and suggestions to the manuscript.

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Received 8 March 2001

Accepted 21 August 2001

TABLE  
Adult Calliphoridae, Muscidae and Silphidae found on fresh or bloat murdered human bodies (% of 12 cadavers)

Order	Genus	Species	Females	Males	Cadavers	(%)
Diptera	<i>Cochliomyia</i>	<i>macellaria</i>	11	0	7	58
	<i>Chysomya</i>	<i>megacephala</i>	9	0	6	50
	<i>Chrysomya</i>	<i>rufifacies</i>	41	1	11	92
	<i>Lucilia</i>	sp.	1	0	1	8
	<i>Musca</i>	<i>domestica</i>	2	0	1	8
Coleoptera	<i>Oxelytrum</i>	<i>discicolle</i>	3	0	1	8

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