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P55. NECROPHAGOUS DIPTERA SPECIES AS ENTOMOTOXICOLOGICAL INDICATORS

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Necrophagous flies are typically the first to reach and colonize the dead body within minutes of death. Adult females begin to lay eggs immediately (oviposit) or deposit first-instar larvae (larviposit) or adults feed on various protein rich fluids seeping from the body and then begin to oviposit. So these flies and especially their larvae can be valuable as a source of information about the poisoning or drug consumption of a victim. The major interest of entomotoxicology is the determination of drug abuse just before death, especially in skeletonised remains where no tissue or fluids are left such as blood, urine or internal organs are no longer available. In the cases where sufficient hair is not present, then arthropods may contain some of the drug or poison and it can be extracted from the body of the fly (particularly larvae) and identified by modern instrumental techniques. So many toxicants (heavy metals and pesticides) and drugs (illegal drugs and medicines) and their metabolites have been tested with various analytic procedures. Until now in many researches, different growth stages of necrophagous diptera species were determined mainly Lucilia sericata, Calliphora vicina, Chrysomya megacephala, Chyr. ruffifacies, then Chyr. albiceps, Chyr. putoria, C. vomitoria, C. dubia, C. stygia, Cochliomyia macellaria, Phormia regina, Protophormia terraenovae (Calliphoridae); Parasarcophaga (Liopygia) ruficornis, Boettcherisca peregrina and Sarcophaga (Liosarcophaga) tibialis (Sarcophagidae); Musca domestica (Muscidae); Megaselia scalaris (Phoridae) and Piophila casei (Piophilidae) as indicators of some toxicants and drugs.

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