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Titolo The Black Flies of Subtropical and Tropical Asia: Taxonomy and Biology

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Nota di contenuto Chapter 1. Introduction -- Chapter 2. Systematic treatments of

subgenera of the genus Simulium -- Chapter 3. Keys to identify 11 subgenera -- Chapter 4. Subgenus Asiosimulium -- Chapter 5.

Subgenus Boophthora -- Chapter 6. Subgenus Byssodon -- Chapter 7. Subgenus Daviesellum -- Chapter 8. Subgenus Eusimulium -- Chapter 9. Subgenus Gomphostilbia -- Chapter 10. Subgenus Montisimulium -- Chapter 11. Subgenus Nevermannia -- Chapter 12. Subgenus Simulium

-- Chapter 13. Subgenus Wallacellum -- Chapter 14. Subgenus Wilhelmia -- Chapter 15. Subgenus Asiosimulium -- Chapter 16. Subgenus Boophthora -- Chapter 17. Subgenus Byssodon -- Chapter

18. Subgenus Daviesellum -- Chapter 19. Subgenus Eusimulium -- Chapter 20. Subgenus Gomphostilbia -- Chapter 21. Subgenus Montisimulium -- Chapter 22. Subgenus Nevermannia -- Chapter 23. Subgenus Simulium -- Chapter 24. Subgenus Wallacellum -- Chapter

25. Subgenus Wilhelmia -- Chapter 26. IndiaOverview, List of species, Identification keys -- Chapter 27. NepalOverview, List of species, Identification keys -- Chapter 28. BhutanOverview, List of

species, Identification keys -- Chapter 29. MyanmarOverview, List of species, Identification keys -- Chapter 30. Sri LankaOverview, List of species, Identification keys -- Chapter 31. ThailandOverview, List of species, Identification keys -- Chapter 32. VietnamOverview, List of species, Identification keys -- Chapter 33. Peninsular Malaysia Overview, List of species, Identification keys -- Chapter 34. Borneo (Sarawak, Sabah, Kalimantan)Overview, List of species, Identification keys -- Chapter 35. Sunda ArchipelagoOverview, List of species, Identification keys -- Chapter 36. East IndonesiaOverview, List of species, Identification keys -- Chapter 37. South ChinaOverview, List of species, Identification keys -- Chapter 38. PhilippinesOverview, List of species, Identification keys -- Chapter 39. TaiwanOverview, List of species, Identification keys -- Chapter 40. Nansei Islands (Japan) Overview, List of species, Identification keys.

Sommario/riassunto

This book uncovers the entire picture of the black fly (Diptera: Simuliidae) fauna in subtropical and tropical Asia (the Oriental Region). Increased discoveries of new species of black flies in the Oriental Region have disclosed a remarkable diversity in terms of phylogenetic lineages and morphological features, particularly adult genitalia and pupal gills. The black fly fauna in the Oriental Region is found to be completely different from those in other regions. The book has two aims, academic and practical. Introduction provides the general information on the biology and effects on human and animal health and welfare of black flies and introduces the unique characteristics of the black fly fauna in this region. Chapter 2 proposes a classification scheme for all 675 named and 44 unnamed species of Oriental black flies, which are placed 11 subgenera and 36 species-groups of the genus Simulium. In Chapter 3, synoptic accounts are given for their distribution, bionomics, and taxonomic comments of all the species. In Chapter 4, the faunas of black flies in 15 countries or areas [India, Nepal, Bhutan, Sri Lanka, Myanmar, Thailand, Peninsular Malaysia, Borneo, Sunda Archipelago (Sumatra, Java, Bali, Lombok, Sumbawa, Flores and Timor), East Indonesia (Sulawesi, Maluku Islands and Irian Java), Vietnam, Philippines, Taiwan, South China, Nansei Islands (Japan)], are overviewed, and species lists and identification keys for females, males, pupae and larvae, are constructed. Ninety-eight figures of 1,691 line-drawings highlight various unique morphological characteristics of most subgenera and species-groups. Chapters 2 and 3 are academically essential for medical or biological scientists and students to study black flies. Keys to identify species in 15 countries or areas in Chapter 4 are of practical use for health workers for the control of insects of medical and veterinary importance, as well as for ecologists for the study of aquatic invertebrates. Many novel morphological characteristics illustrated in the figures appeal to readers and show the importance of biodiversity of natural terrestrial ecosystems. Contents of this book resulted from the author's taxonomic review of all 719 Oriental species of black flies, with reference to 486 publications. .