OCCURRENCE OF CULEX (LOPHOCERAOMYIA) QUADRIPALPIS, CULEX (LOPHOCERAOMYIA) MAMMILIFER, AND URANOTAENIA (PSEUDOFICALBIA) NOVOBSCURA IN ASSAM, INDIA

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ABSTRACT. Culex (Lophoceraomyia) quadripalpis is recorded for the first time in India. Collections of Culex (Lophoceraomyia) mammilifer and Uranotaenia (Pseudoficalbia) novobscura are new records from Assam in northeastern India.

KEY WORDS Culex, new mosquito record, northeastern India, Uranotaenia

INTRODUCTION

The northeastern region of India, which comprises Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura states, has a very rich mosquito fauna and is one of 18 high-biodiversity locations worldwide (Khoshoo 1994). The checklist of mosquitoes, prepared on the basis of various mosquito surveys carried out in northeastern India during the last 3 decades, includes 130 species (37 anophelines and 93 culicines) in 12 genera (Malhotra and Mahanta 1994). Barraud (1934) stated “many mosquito species await discovery in India,” and the number of new mosquito records gradually is increasing in northeastern India. Bhattacharyya et al. (1995) recently described the larva and pupa of Aedes nigrostriatus (Barraud) from Assam. Further, Culex peytoni Bram and Ratnarathikul, Heizmannia reidi Mattingly, and Armigeres joloensis (Ludlow) were reported from Assam (Bhattacharyya et al. 1998, 2000), which constituted new country and regional records. In this note, we report the first collections of Culex quadripalpis (Edwards) in India, and of Culex mammilifer (Leicester) and Uranotaenia novobscura Barraud in the northeastern region of India.

MATERIALS AND METHODS

Immature mosquitoes collected in the field were isolated and reared to adults. The larval and pupal exuviae were numbered and associated with the adults. Male genitalia and antennae were dissected on glass slides in Hoyer’s medium. Three emerged male mosquitoes were identified as Cx. quadripalpis of the subgenus Lophoceraomyia by comparing them with the description provided by Sirivanakarn (1977). The slides were later sent to the Smithsonian Institution, Washington, DC, where the identification was confirmed.

Sirivanakarn (1977) described 58 species of mosquitoes belonging to the subgenus Lophoceraomyia of the genus Culex from the Oriental region. Barraud (1934) recorded 10 species of this subgenus from British India. Culex (Lophoceraomyia) quadripalpis originally was described by Leicester (1908) as Lophoceraomyia sylvestris Leicester from Kuala Lumpur, Malaysia. Later, Edwards (1917) considered both sylvestris and quadripalpis to be synonymous with barkerii (Theobald). However, he later revalidated quadripalpis and listed barkerii and sylvestris as synonyms in the world catalog (Edwards 1932). Sirivanakarn (1977) reasoned that these steps were taken by Edwards because the status of quadripalpis was more stable and had been used more frequently than the other 2 names, viz., sylvestris and barkerii. Sirivanakarn (1977) reported this species to be widespread in Sri Lanka, Malaysia, the Philippines, Vietnam, Singapore, and Indonesia. This is the first record of Cx. quadripalpis from India.

RESULTS AND DISCUSSION

_Culex (Lophoceraomyia) quadripalpis (Edwards)_

In August 1998, larvae were collected from a shaded ground pool in an evergreen tropical rain forest area (Soraipung forest range) of Assam. This is a large tract of reserve forest (about 500 km²) covering parts of Dibrugarh and Tinsukia districts of Assam. Our collection was restricted to an area located in Dibrugarh District (27°35’S, 95°41’E) at an elevation of 152 m above sea level. Three
daman Island, and from the Malabar Coast, India. Although this mosquito is widespread throughout Southeast Asia (Sirivanakarn 1977), it has not been recorded previously from northeastern India.

Uranotaenia (Pseudoficalbia) novobscura
Barraud

In July 1998, larvae of Uranotaenia novobscura were collected from a tree hole in the same forest tract (Soraipung forest range) mentioned above. Reared specimens (4 adult females and 2 males) were identified by examining the associated larval and pupal exuviae and male genitalia and comparing them with the description of Peyton (1977). The specimens were deposited in the museum of Regional Medical Research Centre, Dibrugarh, Assam, India.

Uranotaenia novobscura originally was described by Barraud (1934) from Sukna, Darjeeling District, West Bengal (India). However, Peyton (1977) stated that the type locality of this species should be Suriel of Darjeeling District, instead of Sukna, because specimens from Sukna were Uranotaenia (Pseudoficalbia) obscura Edwards instead of novobscura. This mosquito has been recorded for the 1st time from the northeastern region of India.

ACKNOWLEDGMENTS

We are extremely grateful to James Pecor (Museum Specialist, Walter Reed Biosystematics Unit of Smithsonian Institution, Washington, DC) for confirming the identifications of specimens of Culex (Lophoceraomyia) and for providing relevant literature. We thank S. C. Tewari of CRME (Madurai, India) for his interest and help. Assistance provided by A. C. Rabha during the study is acknowledged. We express our gratitude to anonymous reviewers, whose comments and suggestions improved the manuscript.

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