MOSQUITOES (CULICIDAE) OF STRADBROKE ISLAND

by

ELIZABETH N. MARKS

QUEENSLAND INSTITUTE OF MEDICAL RESEARCH,
BRAMSTON TERRACE, HERSTON, QLD. 4006

A updated summary of the mosquitoes known from Stradbroke Island seems desirable in view of current interest in its natural history (Coleman, Covacevich and Davie, 1984) and the prospect that a bridge to the mainland may initiate drastic alterations to the island's ecology.

In September 1926, I.M. Mackerras exhibited to the Entomological Society of Queensland 8 species of mosquitoes collected in the Dunwich area and he subsequently described the male and larva of Anopheles atratipes (see Mackerras, 1927). Twenty-eight species were recorded by Marks (1949), since when there have been several name changes, some revised identifications, and 8 additional species (3 additional genera) have been collected. Species common to Fraser and Stradbroke Islands were briefly noted by Marks (1968, 1978). Since 1949, the introduced species Aedes aegypti may have disappeared, as has happened in many localities in south-east Queensland where reticulated water has superseded domestic rainwater tanks.

Names changes (name applied in Marks (1949) in parentheses)

Aedes procax (Aedes rubrithorax)
Aedes "Marks sp. No. 52 near carmenti" (Aedes similis)
Anopheles corethroides (Anopheles stigmaticus)
Anopheles hilli (Anopheles amictus hilli)
Coquillettidia linealis (Taeniorhynchus linealis)
Culex quinquefasciatus (Culex sp. near cylindricus)
Culiseta antipodea (Theobaldia sp. near atra)

Additional records


Larvae of Culex bi本月iorhynchus, Mimomyia elegans and Mi chamberlaini metallica were collected by ENH at the edge of Eighteen Mile Swamp, at a site with some green filamentous algae, during the Queensland Naturalists' Club excursion, March 1983.

Toxorhynchites speciosus was reported in Marks (1968).

Biology

Breeding places can be summarised as follows (species listed in parentheses are known to breed in such sites but have not been collected from them on Stradbroke Island):

Permanent freshwater teatree and sedge swamps: An atratipes, (An bancroftii), An corethroides, Cs antipodea, (Cx

Qd Nat. 25(5-6), 1985 116

Permission granted by the University of Queensland Library and the executors of the estate of Dr Elizabeth Nesta Marks for display of this publication on the QUT SERF website. CRICOS No. 00213J
cylindricus), Cx orbostiensis, Mi elegans, Mi chamberlaini metallica, Ur pygmaea.

Fresh temporary rain-filled ground pools (as found in the Two-mile Scrub): Ae alboannulatus, Ae alternans, Ae aculeatus, Ae procax, (Ae theobaldi), Ae vittiger, (Ae multiplex), Ae funereus, Ae "Marks sp. No. 52".

Brackish temporary pools near the beach: Ae vigilax (Ae alternans, Ae funereus, An hilli, Cx sitiens).

Shallow pools dug at the edge of swamps: An annulipes, (Cx annulirostris), Cx halifaxii, Cx quinquefasciatus.

Hollows in trees and logs: Ae notoscriptus, Ae tremulus, (Tx speciosus).

Leaf axils of Crinum and Pandanus: Ae kochi.

Leaf axils of Sword Grass (Gahnia): Ae gahnicola.

Domestic water-holding containers (e.g. tanks, tins, tyres, flower vases, grave tops): Ae notoscriptus, Ae aegypti, (Ae tremulus), Cx quinquefasciatus, (Tx speciosus).

Early stages of Cq linealis and Cq variegata are unknown; larvae of this genus attach by their siphons to stems or roots of aquatic plants and both species probably breed in swamps. Ad venustipes may do likewise; Douglas (1962) reported that the pale green larvae are difficult to find as they remain amongst vegetation below the water surface.

The commonest species taken biting man on Stradbroke Island is Cx orbostiensis, a small brown mosquito, unornamented except for pale bands on its abdomen. Cq linealis, which has golden longitudinal lines on its scutum, is also a persistent biter. Ae vigilax and Cx quinquefasciatus are well known pests. The other species listed will attack man, with the exception of Ad venustipes, Cx halifaxii, Mi elegans, Mi chamberlaini metallica, Tx speciosus, Ur pygmaea and (probably) Cx postspiraculosus and Cs antipodea.

There can be little doubt that further collecting will add other species to those recorded here from Stradbroke Island.

MOSQUITOES RECORDED FROM STRADBROKE ISLAND

Aedeomyia venustipes (Skuse)
Aedes (Finlaya) alboannulatus (Macquart)
            gahnicola Marks
            kochi (Donitz)
            notoscriptus (Skuse)
Aedes (Macleaya) tremulus (Theobald)
Aedes (Mucidus) alternans (Westwood)
Aedes (Ochlerotatus) aculeatus (Theobald)
            procax (Skuse)
            theobaldi (Taylor)
            vigilax (Skuse)
            vittiger (Skuse)
Aedes (Pseudokusea) multiplex (Theobald)
Aedes (Stegomyia) aegypti (Linnaeus)
Aedes (Verrallina) funereus (Theobald) "Marks sp. No. 52" near carmenti Edwards
Anopheles (Anopheles) atratipes Skuse bancroftii Giles corethroides Theobald
Anopheles (Cellia) annulipes Walker hilli Woodhill and Lee
Coquillettidia (Coquillettidia) linealis (Skuse) variegata Dobrotworsky
Culex (Culex) annulirostris Skuse bitaeniorhynchus Giles quinquefasciatus Say sitiens Wiedemann
Culex (Lophoceraomyia) cylindricus Theobald orbostiensis Dobrotworsky
Culex (Lutzia) halifaxii Theobald
Culex (Neoculex) postspiraculosus Lee
Culiseta (Climacura) antipoda Dobrotworsky
Mimomyia (Etorleptiomia) elegans (Taylor)
Mimomyia (Mimomyia) chamberlaini metallica (Leicester)
Toxorhynchites (Toxorhynchites) speciosus (Skuse)
Uranotaenia (Uranotaenia) pygmaea Theobald

REFERENCES


Marks, E.N. 1968 Mosquitoes (Culicidae) of Fraser Island. Qd Nat. 19: 47-50.

Marks, E.N. 1978 Mosquitoes (Culicidae) of Fraser Island - II. Qd Nat. 22: 12-14.