Sugar feeding by *Aedes albopictus* in the Torres Strait, Australia

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Description of data archiving for analysis

This dataset was collected for a study with the aim to quantify the abundance and sugar feeding status by *Ae. albopictus* over time and across different islands in the Torres Strait. The structure and composition of the plant community at each sampling station was surveyed. The mosquito population was sampled and sequentially fructose positivity and content of the mid-gut was analysed.

Field survey

Parameter	Details
Aim	To assess the abundance and sugar feeding status by *Ae. albopictus* in the Torres Strait Islands
Dates	Two rounds: 4th – 26th March 2021 and 23rd March – 14th April 2022
ProjectID	SMI01 and SMI02
Island	Hammond (Kirriri) and Yorke (Masig) Islands in the Torres Strait
Sampling stations	On each island, repeated sampling was conducted at eight fixed stations, with 4 stations in village and 4 stations in bushland.
Sampling frequency	Mosquitoes were collected twice each day (morning and afternoon) for eight consecutive dates in each round of sampling.
Mosquito trap	Sweep-net
Vegetation survey	2 m by 20 m belt transect at each sampling station
Data tables	Four tables: Mosquito data summarized by sampling effort, Individual mosquito fructose content, vegetation structure and GIS locations

Data dictionary for final mosquito data table (This table has merged records from the mosquito survey, the cold anthrone assays and the vegetation survey. Each row of data represents one sampling effort)

Parameter	Type	Details
ProjectID	Select_one	Unique code for each year (SMI01 = March 2021 and SMI02 = April 2022)
Island	Select_one	Island (Hammond or Yorke)
Habitat	Select_one	Broad environmental classification (Village or Bushland)
Station	Select_one	Sampling station label (A to H)
Date	Date	Date of mosquito sampling
Time	Select_one	Time of mosquito sampling (Morning or Afternoon)
AlboMale_Unfed	Integer	Total unfed male *Ae. albopictus* captured
AlboMale_Clear	Integer	Total fed male *Ae. albopictus* captured with engorged abdomen visibly containing clear content
Male	Integer	Total male *Ae. albopictus* captured
AlboFemale_Unfed	Integer	Total unfed female *Ae. albopictus* captured
AlboFemale_Clear	Integer	Total fed female *Ae. albopictus* captured with engorged abdomen visibly containing clear content
AlboFemale_Blood	Integer	Total fed female *Ae. albopictus* captured with engorged abdomen visibly containing blood
Female	Integer	Total female *Ae. albopictus* captured
AlboTotal	Integer	Total *Ae. albopictus* captured
Male_Negative	Integer	Total fructose-negative male *Ae. albopictus*
Male_Positive	Integer	Total fructose-positive male *Ae. albopictus*
MaleTotalTested	Integer	Total number of male *Ae. albopictus* tested by cold anthrone for fructose
Female_Negative	Integer	Total fructose-negative female *Ae. albopictus*
Female_Positive	Integer	Total fructose-positive female *Ae. albopictus*
FemaleTotalTested	Integer	Total number of female *Ae. albopictus* tested by cold anthrone for fructose
Total_Positive	Integer	Total fructose-positive *Ae. albopictus*
TotalTested	Integer	Total number of *Ae. albopictus* tested by cold anthrone for fructose
Flowers	Select_one	The prevalence of flowers in the sampling station categorized as none, low, medium or high
Fruit	Select_one	The prevalence of fruit in the sampling station categorized as none, low, medium or high
Cover Canopy (%)	Integer	The percentage of canopy cover in the sampling station

Data dictionary for final mosquito fructose content table (This table has records from the cold anthrone assays merged with the details of the sampling effort. Each row represents one individual mosquito)

Parameter	Type	Details
ProjectID	Select_one	Unique code for each year (SMI01 = March 2021 and SMI02 = April 2022)
Island	Select_one	Island (Hammond or Yorke)
Habitat	Select_one	Broad environmental classification (Village or Bushland)
Station	Select_one	Sampling station label (A to H)
Date	Date	Date of mosquito sampling
Time	Select_one	Time of mosquito sampling (Morning or Afternoon)
UniqueID	Text	Unique identifier for each individual mosquito
Sex	Select_one	Sex of the individual mosquito
OD	Decimal	Optical density absorbance measured from the cold anthrone assay using a microplate reader at 630 nm
mean.threeSD	Decimal	Sum of the mean of the absorbance values from the six negative controls on each plate plus three standard deviations
blank	Decimal	The optical density absorbance of the blank cell in the microplate containing 25% ethanol
PosNeg	Select_one	Classification of each individual mosquito as fructose negative or positive
Slope	Decimal	Slope of the standard curve calculated from the optical density absorbances of the standard fructose samples (ranging from 250 to 10 µg in 25% ethanol)
Fructose.ug.per.partmosq	Decimal	The sample absorbance less the OD value of the blank and then divided by the slope of the standard curve
Fructose.per.mosq	Decimal	The extract assayed of each individual was 12%, thus the total extract volume the fructose content of the whole mosquito was calculated by multiplying the µg of fructose in the sample by 8.5

Data dictionary for final vegetation table (This table has records from the vegetation survey. Each row represents one sampling station)

Parameter	Type	Details
Island	Select_one	Island (Hammond or Yorke)
Habitat	Select_one	Broad environmental classification (Village or Bushland)
Station	Select_one	Sampling station label (A to H)
Amaryllidaceae	Integer	Number of specimens from Amaryllidaceae family
Anacardiaceae	Integer	Number of specimens from Anacardiaceae family
Apocynaceae	Integer	Number of specimens from Apocynaceae family
Araceae	Integer	Number of specimens from Araceae family
Arecaceae	Integer	Number of specimens from Arecaceae family
Aristolochiaceae	Integer	Number of specimens from Aristolochiaceae family
Asparagaceae	Integer	Number of specimens from Asparagaceae family
Asteraceae	Integer	Number of specimens from Asteraceae family
Bignoniaceae	Integer	Number of specimens from Bignoniaceae family
Burseraceae	Integer	Number of specimens from Burseraceae family
Caesalpiniaceae	Integer	Number of specimens from Caesalpiniaceae family
Capparaceae	Integer	Number of specimens from Capparaceae family
Casuarinaceae	Integer	Number of specimens from Casuarinaceae family
Chrysobalanaceae	Integer	Number of specimens from Chrysobalanaceae family
Colchicaceae	Integer	Number of specimens from Colchicaceae family
Combretaceae	Integer	Number of specimens from Combretaceae family
Commelinaceae	Integer	Number of specimens from Commelinaceae family
Convolvulaceae	Integer	Number of specimens from Convolvulaceae family
Crassulaceae	Integer	Number of specimens from Crassulaceae family
Dilleniaceae	Integer	Number of specimens from Dilleniaceae family
Dioscoreaceae	Integer	Number of specimens from Dioscoreaceae family
Elaeocarpaceae	Integer	Number of specimens from Elaeocarpaceae family
Euphorbiaceae	Integer	Number of specimens from Euphorbiaceae family
Fabaceae	Integer	Number of specimens from Fabaceae family
Flagellariaceae	Integer	Number of specimens from Flagellariaceae family
Lamiaceae	Integer	Number of specimens from Lamiaceae family
Lauraceae	Integer	Number of specimens from Lauraceae family
Lecythidaceae	Integer	Number of specimens from Lecythidaceae family
Loranthaceae	Integer	Number of specimens from Loranthaceae family
Malvaceae	Integer	Number of specimens from Malvaceae family
Menispermaceae	Integer	Number of specimens from Menispermaceae family
Mimosaceae	Integer	Number of specimens from Mimosaceae family
Moraceae	Integer	Number of specimens from Moraceae family
Musaceae	Integer	Number of specimens from Musaceae family
Myristicaceae	Integer	Number of specimens from Myristicaceae family
Myrtaceae	Integer	Number of specimens from Myrtaceae family
Oleaceae	Integer	Number of specimens from Oleaceae family
Pandanaceae	Integer	Number of specimens from Pandanaceae family
Passifloraceae	Integer	Number of specimens from Passifloraceae family
Phyllanthaceae	Integer	Number of specimens from Phyllanthaceae family

Pittosporaceae	Integer	Number of specimens from Pittosporaceae family
Poaceae	Integer	Number of specimens from Poaceae family
Polygalaceae	Integer	Number of specimens from Polygalaceae family
Polypodiaceae	Integer	Number of specimens from Polypodiaceae family
Portulaceae	Integer	Number of specimens from Portulaceae family
Putranjivaceae	Integer	Number of specimens from Putranjivaceae family
Rhamnaceae	Integer	Number of specimens from Rhamnaceae family
Rhizophoraceae	Integer	Number of specimens from Rhizophoraceae family
Rubiaceae	Integer	Number of specimens from Rubiaceae family
Rutaceae	Integer	Number of specimens from Rutaceae family
Sapindaceae	Integer	Number of specimens from Sapindaceae family
Sapotaceae	Integer	Number of specimens from Sapotaceae family
Smilacaceae	Integer	Number of specimens from Smilacaceae family
Taccaceae	Integer	Number of specimens from Taccaceae family
Turneraceae	Integer	Number of specimens from Turneraceae family
Verbenaceae	Integer	Number of specimens from Verbenaceae family
Vitaceae	Integer	Number of specimens from Vitaceae family

Data dictionary for GIS locations table (This table records the location of the sampling stations.)

Parameter	**Type**	**Details**
Island	Select_one	Island (Hammond or Yorke)
Habitat	Select_one	Broad environmental classification (Village or Bushland)
Station	Select_one	Sampling station label (A to H)
Latitude	Decimal	Latitude in decimal degrees
Longitude	Decimal	Longitude in decimal degrees