Larval habitats of the *Anopheles farauti* and *Anopheles lungae* complexes in the Solomon Islands

Description of data archiving for analysis

A series of experiments examining the bionomic parameters of *Anopheles farauti* were conducted on Ngella Sule Island in Central Province, Solomon Islands. This work commenced on 27/8/2011 and was completed on 21/02/2014. The data from the entire set of experiments has been archived into one database, which has been analysed over a series of manuscripts. Each experiment can be quickly identified using the "ProjectID" which runs from MTC01 to MTC22 (MTC14 was skipped).

For this larval paper, the dataset from Central Province was complemented with larval surveys conducted in Western Province. The data from Western Province was initially held in a separate database, but has been archived together.

Larval distribution

Parameter	Details
Aim	To investigate the distribution of mosquitoes throughout the Provinces by larval surveys
Dates	The larval surveys were conducted during August to September 2011 in Central Province and May 2013 in Western Province.
Tables	There are three linked tables that contain the larval distribution data 1. GIS Locations – This table details the Latitude and Longitude for each site that was surveyed. 2. Field Survey – This table contains the information that was recorded during each survey. 3. Molecular – This table contains the results of PCR analyses run for species identification of larval samples Data in the three tables is linked using the SiteID
ProjectID	MTC01, ENT01 and ENT02
Trapping method	Dipping

Data dictionary for GIS Locations table

Parameter	Type	Details
SITEID	Text	The unique identifying code for the larval site
DATE	Date/Time	Date that the site was first surveyed
HABITATTYPE	Text	The type of habitat that constitutes the survey site
COMMENT	Text	Notes
PHOTO	Text	File name for photo
LONGWGS84	Double	Longitude for the larval site
LATWGS84	Double	Latitude for the larval site

Data dictionary for the Field Survey table

Parameter	Type	Details
ProjectID	Text	Identifier for the specific project
Province	Text	Province where the survey was conducted
Zone	Text	Zone where the survey was conducted
Village	Text	Village where the survey was conducted
SiteID	Integer	The unique identifying code for the larval site
DateVisit	Date/Time	Date that the survey was conducted
HabitatType	Text	The type of habitat that constitutes the survey site
HabitatWet	Text	Surface Water
Perimeter	Text	Length of perimeter of habitat
Anophelines	Text	Records if anopheline larvae were present or absent
Culicines	Text	Records if culicine larvae were present or absent
Pupae	Text	Records if pupae were present or absent
Notes	Text	Notes
StaffMember	Text	Name of the staff member who conducted the survey

Drop-down options used in the Field Survey table

Parameter	Drop-downs fields	Details
HabitatType	Puddles & tyre tracks	Temporary pool of water in surface depression
HabitatType	Swampy areas	Low lying uncultivated ground where water collects
HabitatType	Mangrove swamp/ saltmarsh	Swamp with mangroves
HabitatType	Drain/Ditch	Narrow channel filled with rainwater runoff from roads/paths
HabitatType	Man-made holes/ constr pits	Artificial body of water
HabitatType	Water storage containers	Man-made tanks
HabitatType	Spring	Permanent or semi-permanent pit or hole filled by natural spring water
HabitatType	Well	Man made water source fed by natural water seepage
HabitatType	Stream	Narrow (length>>width) water body with measurable water surface flow
HabitatType	Pond	Permanent (or semi-permanent) naturally formed body of still water (e.g., a permanent or semi-permanent ground pool)
HabitatType	Rock pool	A pool of water among rocks
HabitatType	Blocked stream mouth	Body of water that forms when the point of discharge is blocked by a sandbar
HabitatWet	Yes	The habitat contains water
HabitatWet	No	The habitat is completely dry
Perimeter	<10m	The habitat is small and the perimeter is less than 10m
Perimeter	10-100m	The habitat is medium and the perimeter is between 10 and 100m
Perimeter	>100m	The habitat is large and the perimeter is over 100m
Anophelines	Absent	Anopheline larvae are absent
Anophelines	Early only	Only early (1^{st} and 2^{nd}) stage anopheline larvae are present
Anophelines	Late only	Only late (3^{rd} and 4^{th}) stage anopheline larvae are present
Anophelines	Early & Late	Both early and late stage anopheline larvae are present
Culicines	Absent	Culicine larvae are absent
Culicines	Early only	Only early (1^{st} and 2^{nd}) stage culicine larvae are present
Culicines	Late only	Only late (3^{rd} and 4^{th}) stage culicine larvae are present
Culicines	Early & Late	Both early and late stage culicine larvae are present
Pupae	Absent	Pupae are absent
Pupae	Present	Pupae are present

Data dictionary for the Molecular table

Parameter	Type	Details
ProjectID	Text	Identifier for the specific project
Laboratory	Text	Identifier of the laboratory where the analysis was conducted (AMI or UQ)
LabID	Text	Identifier for each mosquito used in the laboratory
Stage	Text	Records life cycle stage of sample: larvae vs adult
Province	Text	Province name
Village	Text	Village name
SiteID	Integer	The unique identifying code for the larval site
Trap	Text	Trap type
Species (PCR)	Text	Molecular identification to species
Notes	Text	Notes

Lagoon micro-productivity

For lagoon micro-productivity, a dataset was constructed that detailed the total number of anophelines per dip, and scored presence as 0 or 1 for each dip.

Parameter	**Details**
Aim	The aim was to examine the natural composition of larval instars at different sites within a large permanent breeding site in Haleta village
Dates	10 consecutive days from the 2nd – 11th December 2012
Table	See file "MTC12_Lagoon micro-productivity.csv"
ProjectID	MTC12
Trapping method	Dipping
Number of stations	5 stations

Data dictionary for Lagoon micro-productivity table

Parameter	**Type**	**Details**
Date	Date/Time	Date
Rainfall	Integer	Rainfall (in mm) or if there was rain
Location	Integer	Location of larval site (see Figure 1)
water temp	Integer	Water temperature (°C)
Salinity (d20/d20)	Double	Salinity (d20/d20)
Salinity (%)	Integer	Salinity (%)
Dip#	Integer	Dip number (10x total)
Instar 1	Integer	Number of Instar 1
Instar 2	Integer	Number of Instar 2
Instar 3	Integer	number of Instar 3
Instar 4	Integer	Number of Instar 4
Pupae	Integer	Number of pupae
TOTAL_ANOPH_LARVAE	Integer	The total number of anopheline larvae per dip
Larvae_Presence	Integer	Presence of anopheline larvae recorded as 0 or 1 for each dip
culex	Integer	Number of culex
Notes	Text	Notes

Density dependent development in the lagoon

Parameter	Details
Aim	Investigations of potential density-dependent regulation of mosquito larvae were undertaken by seeding first instar *An. farauti* at densities of 10, 50, 100 and 200 larvae into floating cages
Dates	10 consecutive days from the 2nd – 11th December 2012
Table	See file "MTC12_Density dependence.csv"
ProjectID	MTC12
Analysis	The density-dependent regulation of mosquito larvae was analysed using a Cox regression to compare the survival of mosquito larvae when held at different densities.

Data dictionary for Density dependent development in the lagoon

Parameter	Type	Details
InitialDensity	Integer	Initial density of F1 larvae
Replicate	Integer	Replicate number
Mosq.no	Integer	Individual identifier for each larvae within a replicate
TimeToDeath	Integer	Days that each individual larvae survived
censor	Integer	Censor