BITING INSECT CONSIDERATIONS FOR PALMERSTON
1983 DRY SEASON

Prepared by:

PETER WHELAN
Senior Medical Entomologist
N.T. Dept. of Health

16 June 1983
BITING INSECT CONSIDERATIONS FOR PALMERSTON
1983 DRY SEASON

PART A: MOSQUITOES

The major mosquito breeding areas of importance in the Palmerston area have been discussed in detail on the 5th Progress Report "Mosquitoes and Biting Midge Investigation Palmerston".

Certain of the mosquito breeding areas such as Marlow's Lagoon and the Pandanus area, south of Moulden are expected to be areas of engineering rectification that will be proceeding shortly.

It is assumed that mosquito breeding areas within proposed residential development will be rectified as a matter of course, as the suburbs are developed. However, there are number of mosquito breeding sites that are outside the suburban area that will require rectification as soon as possible, before considerable numbers of residents move into the area.

The sites for consideration and rectification are dealt with in order of priority:

1. **The Pandanus Area**

The low flow facility from the Moulden drain and through the pandanus swamp should be proceeded with as soon as possible.

Particular engineering investigation is needed to plan the route and the discharge point with the entomological guidelines that the discharge points should be in a regularly flooded tidal area, and that the route should be as low as possible in order to drain as much surface water from the pandanus swamp.

The adequate drainage of this area is essential for mosquito control in the Palmerston area.
2. Marlow's Lagoon

The rectification and formalisation of Marlow's Lagoon will need to proceed as soon as engineering and biological details are resolved.

As an interim measure, the outlet from Marlow's Lagoon should be lowered by approximately a metre by a narrow ditch to,

(a) Prevent the 1983/84 wet season inundating large areas of shallow grass; and

(b) to allow the lagoon to dry out sooner in the 1984 dry season so that rectification works can proceed earlier.

3. Grassy Lagoon

Development of the Moulden drain has severely aggravated this site as a source of mosquitoes, and it is recommended that it should be drained in a co-ordinated approach, through the pandanus area in the coming dry season.

4. Driver Drainage

Investigation is needed to determine how the stormwater drainage from the University area and in particular the low flow drainage, will be directed into the low lying flood plain.

The seasonally flooded lower areas, and in particular the culverts of First Creek under the temporary access track, will need drainage consideration as soon as possible.

The drainage of Second Creek will also need similar consideration.
5. The Sand Mining Areas

These large disturbed areas of both sand mining and gravel mining will need to be rehabilitated in the coming dry season.

6. Yarrawonga Swamp

The seasonally flooded area near Yarrawonga (detailed in the 6th Progress Report - May 1983) are the result of water impedance from past constructions. They will need to be drained via Millners Creek.

In particular storm drains from the industrial area to the east of the Stuart Highway will have to be investigated to determine the need for sediment basins and dry season flow drainage and discharge points.

PART B : BITING MIDGEs

Biting midges are shaping up to be the major potential biting insect problem for Palmerston. On present indications it appears that the southern half of Bellamack and Suburb 12 will be subjected to extremely high numbers of biting midges and consideration should be given to dropping these areas as suburban areas until the situation can be resolved.

The area of mangroves south-west of Bellamack will ultimately determine the suitability of Bellamack for urban living. This area is designated as recreation in the Palmerston land use strategy, but nothing short of reclamation of the entire mangrove area throughout this designated recreation area would enhance Bellamack as a suitable residential area, on present indications.

It would therefore be necessary to look at the land use for this area now, before plans are finalised for development of the lower portions of Mouliden and Bellamack.
This area would be highly undesirable for any recreation use such as ovals or any other open air facilities that would be used by people, particularly near dawn and dusk.

Similarly, the development of the open space south-west of Moulden would need to be considered. This area has a very high biting midge problem and it may be opportune to develop this area as a rural sub-division to act as a buffer between the mangroves and Moulden.

The two proposed rural sub-divisions to the west of Palmerston should similarly be developed as soon as possible to act as buffers between the mangroves and the residential areas.

Around all of these areas it is urged that access easements between the mangroves and residential areas are left, to carry out future ground control of biting insects.

Peter Whelan
Senior Medical Entomologist
NT Health