

A Survey for Viral Agents Transmitted by *Culicoides* in Northern Thailand

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OBJECTIVE : To isolate and identify viral disease agents from *Culicoides* collected in Chiangmai Valley.

BACKGROUND : Studies in 5 provinces of Northern Thailand--Chiangmai, Chiang Rai, Phrae, Lampang and Mae Hong Sorn--revealed the presence of 35 species of bloodsucking midges, including one species of daytime-biting midges, *Forcipomyia anabaenae*, 33 species of *Culicoides* and *Leptoconops xuthoscele* (1). Although *Culicoides* midges have not yet been implicated in the transmission of arboviruses in Thailand, a total of 20 viruses have been reported recovered from wild-caught *Culicoides* elsewhere in the world (2). Interest in the vector potential of these biting midges in Northern Thailand arises as the result of the reported isolation of Ingwavuma virus in the Chiangmai Valley in 1970 (3).

METHODS : *Culicoides* were collected in CDC light traps (with and without CO₂ as an attractant) which were placed in rural villages located in Doi Saket, Hang Dong, Mae Rim and Sarapee Districts of the Chiangmai Valley. Collections were also made by aspiration of midges attracted to cattle and buffalo.

Specimens were killed by freezing on dry ice and returned in frozen state to the lab in Bangkok and stored at -70°C. After identification and pooling by species, the pools will be processed for virus isolation attempts.

RESULTS : Collections using CDC light traps with CO₂ were made on 53 nights between 17 March and 1 September. Light trap collections without CO₂ were made on 18 nights, with biting and resting collections in animal pens being made on the same nights. Rainfall was quite low during the months of March thru July and may have contributed to the reduced population of *Culicoides* in the study area. Consequently only low numbers of adults were collected in all areas. Identification and virus-isolation results are not yet complete.

REFERENCES

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