

**A-15: Incrimination of malaria vectors in a gem mining area (Elahera, Matale District) during the wet season**

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Malaria is a major health problem in the gem mining areas of the Matale District. A number of potential anopheline vectors of malaria occur in this region, and in an attempt to rationalize control measures, a study was carried out to incriminate the vectors of malaria.

Anopheline mosquitoes were caught during the wet season of 1993, using indoor and outdoor light traps, bovid-baited trap-huts, bovid-baited net traps, window (exit) traps, and indoor pyrethrum spray sheet collections. A total of 492 female anophelines comprising *An. aconitus* (n=11), *An. barbirostris* (n=07), *An. barbumbrosus* (n=02), *An. culicifacies* (n=107), *An. maculatus* (n=02), *An. nigerrimus* (n=26), *An. pallidus* (n=05), *An. peditaeniatus* (n=27), *An. subpictus* (n=238), *An. tessellatus* (n=06), *An. vagus* (n=04) and *An. varuna* (n=57) were collected, identified in the field and stored in individual vials for assay.

After re-checking identifications in the laboratory, Enzyme-linked Immunosorbent Assays (ELISA) were used to detect the presence of circumsporozoite protein of *Plasmodium falciparum*. *P. vivax* and *P. vivax* variant VK-247 in the head-thoraces of the mosquitoes. *Anopheles culicifacies* (5/107) and *An. varuna* (2/57) were positive for *P. falciparum* only. *Anopheles subpictus* was positive for *P. falciparum* (7/238) and *P. vivax* (4/238). Mixed infections of the two parasites within the same mosquito were not recorded. None of the mosquito species tested positive for the *P. vivax* variant. The study indicated that *An. culicifacies* and *An. subpictus* were equally important in overall malaria transmission, and control measures are needed to take into account the latter species too, in the Elahera region.