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Most important breeding habitats of potential vectors of malaria in Sri Lanka

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Anopheline larval surveys were carried out from March 2007 – May 2008 at 24 localities in 11 districts to study the breeding habitats of potential malaria vectors in Sri Lanka. Larval collections were made in all potential anopheline breeding habitats at 6 dips per m^2 surface area of water. Larvae were staged and identified at the 3rd and 4th stages and the larval density of each species in each habitat was given as the percentage of collection and (number per 100 dips). Habitats that had larval density > 5 were considered as "most important habitats". Larval densities of most important habitats were: *An. aconitus*: wells, 55.71% (2.98), river beds, 22.86% (0.19), ground pools 12.86% (0.54), rice fields 5.71% (0.27); *An. annularis*: quarry pits 77.27% (8.67), tanks 22.73% (0.35). *An. barbirostris*: river beds 49.46% (3.44), wells 16.96% (7.25), burrow pits 13.21% (6.93), ground pools 10.18% (3.40); *An. culicifacies*: river beds 95.02% (13.26), quarry pits 1.07% (6.12), hoof prints 0.36% (6.06); *An. jamesii*: burrow pits 26.76% (11.05), tanks 17.69% (5.40), river beds 16.10% (0.88), ground pools 12.02% (3.16), rice fields 8.84% (2.62), irrigation canals 5.21% (2.39), hoof prints 1.59% (10.61) tyre prints 4.99% (8.87); *An. nigerrimus*: river beds 21.17% (1.17), tanks 18.92% (5.82), rice fields 13.29% (3.97), irrigation canals 12.16% (5.61), burrow pits 11.04% (4.59), ground pools 8.78% (2.33), wells 7.43% (2.52), marshes 6.76% (4.30). *An. peditaeniatus*: rice fields 34.35% (13.64), river beds 30.29% (2.22), ground pools 10.49% (3.70), burrow pits 8.29% (4.59), marshes 5.08% (4.30) hoof prints 0.68% (6.06). *An. subpictus*: ground pools 47.37% (11.27), hoof prints 16.04% (96.97), river beds 13.78% (0.68), burrow pits 8.27% (3.09). tyre prints 4.51% (7.26), *An. tessellates*: wells 47.31% (3.36), river beds 29.03% (0.36), burrow pits 12.91% (1.12), irrigation canals 8.60% (0.83). *An. vagus*: river beds 25.19% (1.63), rice fields 16.92% (5.91), ground pools 16.54% (5.13), tyre prints 16.54% (34.68) burrow pits 13.08% (6.37) hoof prints 3.65% (28.79). *An. varuna*: river beds 71.75% (9.58), ground pools 10.22%, (6.56) wells 7.71%.(6.34). River beds (45.05%), ground pools (9.37%), rice fields (8.32%), tanks (8.07%) and burrow pits (5.97%) provided 76.78% breeding surface of the anopheline fauna in the study areas. Anopheline vector larval control is an essential element of the malaria control programme in the country. Thus, anopheline larval control in the most important and abundant breeding habitats would be much helpful for effective and efficient malaria control in the country.

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