Ectoparasites from East African vertebrates

During the examination of live-trapped small mammals from Muguga in Kenya (2100 m, a.s.l.) for the presence of blood parasites (Peirce, 1970, 1972), the opportunity was taken to collect any ectoparasites which were present. Ectoparasites were collected also from some East African vertebrates in the course of other investigations, details of which have been published elsewhere (Peirce, 1972).

Fleas were recovered from anaesthetized small mammals which had been put in a polythene bag along with a small wad of cotton wool soaked in ether. Some mites were also recovered by this method. Mites and lice were collected usually with the aid of a small brush or forceps. Ticks were collected from all vertebrates by carefully detaching them from the skin with forceps. All the ectoparasites recovered were preserved in 70% alcohol 5% glycerol. A check-list of hosts, localities and parasites recovered is given in Table 1.

Hoogstraal (1956) gives a few records of *Rhipicephalus simus* occurring on primates although none from *Perodicticus potto*. No primate records are given for *Haemaphysalis leachii* either by Hoogstraal (1956) or Yeoman & Walker (1967). The occurrence of these ticks from *P. potto* is therefore of particular interest and appear to be the first records from this host. The occurrence of *Ctenocephalides felis strongylus* also from *P. potto* is unusual as this flea is not generally found on primates. The *P. potto* from which the above parasites were recovered had been brought in from one of the local villages and consideration must be given to the possibility that the parasites were acquired from this source, although in the case of the ticks these were attached and feeding.

Hopkins (1947) and Hubbard (1966) do not record *Rhabdomys pumilio* as a host of either *Listropsylla dolosa* or *Dinopsyllus lypusus*. *Xenopsylla brasiliensis* does not appear to have been recorded previously from *Cricetomys gambianus*, the common species of this host being *X. crinita* and *X. tortus*.

The specimens of *Piagetia titan* were all found attached to the pharynx in both *Pelecanus onocrotalus* and *P. rufescens*. The *Amblyomma* nymph recovered from *P. rufescens* was found attached to the inside of the pouch and this must be considered as an unusual predilection site. *Rhipicephalus pulchellus* ticks recovered from the gizzard of a *Buphagus erythrorhynchus* (Red-billed Oxpecker) was not unexpected, as ticks form part of the regular diet of these birds frequently observed ‘de-ticking’ on the larger mammals.

In addition to the parasites recorded in Table 1 some small pseudoscorpions were recovered from *Lophuromys flavopunctatus* at Muguga, but it has not been possible to identify these. Pseudoscorpions of the family Cheliferidae were observed frequently in large animal burrows, particularly in the Serengeti. The collection of fleas from thirty-four large animal burrows in the Aitong-Mara area, Kenya Masailand, resulted in the recovery of three species: *Neotunga inexpectata* (Smit, 1950), *Moespysylla sjoestedti* Rothschild, 1908 and *Echidnophaga larina* Jordan & Rothschild, 1906. All three are commonly found on the warthog (*Phacochoerus aethiopicus*) although

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Table 1. Ectoparasites of some East African vertebrates

<table>
<thead>
<tr>
<th>Host</th>
<th>Locality</th>
<th>Parasites</th>
</tr>
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<tbody>
<tr>
<td><strong>Mammals</strong></td>
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<tr>
<td><em>Perodicticus potto</em> (Müller)</td>
<td>Muguga, Kenya</td>
<td><em>Haemaphysalis leachii</em> (Audouin, 1827). A.</td>
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<tr>
<td></td>
<td></td>
<td><em>Rhipicephalus sinus</em> Koch, 1844. A.</td>
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<td></td>
<td></td>
<td><em>Ctenocephalides felis strongylus</em> (Jordan, 1925).</td>
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<tr>
<td><em>Taurotragus oryx</em> (Pallas)</td>
<td>Athi Plains, Kenya</td>
<td><em>Rhipicephalus pulchellus</em> Gerstäcker, 1873. A.</td>
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<td></td>
<td></td>
<td><em>R. evertsi</em> Neumann, 1897. A.</td>
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<tr>
<td></td>
<td></td>
<td><em>R. sinus</em> A.</td>
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<tr>
<td></td>
<td></td>
<td><em>Hyalomma rufipes</em> Koch, 1844. A.</td>
</tr>
<tr>
<td><em>Gazella thomsonii</em> Gunther</td>
<td>Athi Plains</td>
<td><em>R. evertsi</em> A.</td>
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<tr>
<td><em>Aepyceros melampus</em> (Lichtenstein)</td>
<td>Nanyuki, Kenya</td>
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<tr>
<td><em>Sylvicapra grimmia</em> (L.)</td>
<td>Thomson’s Falls, Kenya</td>
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<td><em>Haemaphysalis parmata</em> Neumann, 1905. A.N.</td>
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<tr>
<td><em>Rhynchotragus kirkii</em> Gunther</td>
<td>Serengeti, Tanzania</td>
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<td></td>
<td></td>
<td><em>H. leachii</em> A.</td>
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<td></td>
<td></td>
<td><em>Rhipicephalus pravus</em> Dönitz, 1910. A.</td>
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<td></td>
<td></td>
<td><em>Amblyomma</em> sp. N.</td>
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<tr>
<td><em>Phacochoerus aethiopicus</em> (Pallas)</td>
<td>Nanyuki</td>
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<td></td>
<td>Ruwenzori National Park, Uganda</td>
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<td></td>
<td>Serengeti</td>
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<td><em>Haematopinus phacochoeri</em> Enderlein, 1908.</td>
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<td><em>Amblyomma cohaerens</em> Dönitz, 1909. A.</td>
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<td></td>
<td><em>Rhipicephalus compositus</em> Neumann, 1897. A.</td>
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<td><em>R. sinus</em> A.</td>
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<td><em>Amblyomma gemma</em> Dönitz, 1909. A.</td>
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<td><em>Amblyomma</em> sp. N.</td>
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<td><em>Hyalomma albiparvatum</em> Schulze &amp; Schlottke, 1930. A.</td>
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<td><em>Ornithodoros moubata porcinus</em> (Walton). N.</td>
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<td><em>R. pulchellus</em> A.</td>
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<td><em>Amblyomma tholloni</em> Neumann, 1899. A.</td>
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<tr>
<td><em>Loxodonta africana</em> (Blumenbach)</td>
<td>Tsavo East National Park, Kenya</td>
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<tr>
<td><em>Diceros bicornis</em> (L.)</td>
<td>Tsavo East National Park</td>
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<tr>
<td><em>Canis mesomelas</em> Schreber</td>
<td>Serengeti</td>
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<td><em>Genetta tigrina</em> (Schreber)</td>
<td>Muguga</td>
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<td><em>C. felis strongylus</em></td>
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<td></td>
<td><em>H. leachii</em> group. A.</td>
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<td><em>Haemaphysalis parmata</em>. A.N.</td>
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<td></td>
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<td><em>Ixodes</em> sp. N.L.</td>
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<td></td>
<td></td>
<td><em>Echidnophaga gallinacea</em> Westwood, 1875.</td>
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<tr>
<td>Host</td>
<td>Locality</td>
<td>Parasites</td>
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<td>------------------------------------------</td>
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<td>---------------------------------------------------------------------------</td>
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<tr>
<td><em>Herpestes sanguineus</em> (Rüppell)</td>
<td>Muguga</td>
<td><em>H. leachi</em> group. A.</td>
</tr>
<tr>
<td><em>Xerus erythropus</em> Thomas</td>
<td>Muguga</td>
<td><em>Haemaphysalis houyi</em> Nuttall &amp; Warburton, 1915. A.</td>
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<td></td>
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<td><em>Ctenocephalides crataepeus</em> (Jordan, 1925).</td>
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<tr>
<td><em>Cricetomys gambianus</em> Waterhouse</td>
<td>Muguga</td>
<td><em>Xenopsylla brasiliensis</em> Baker.</td>
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<td><em>Hemimerus nr vosseleri</em> Rehn &amp; Rehn.</td>
</tr>
<tr>
<td><em>Rhabdomys pumilio</em> (Sparrman)</td>
<td>Muguga</td>
<td><em>H. leachi</em> group. N.</td>
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<td></td>
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<td><em>Laelaps giganteus</em> Berlese.</td>
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<td><em>L. muricola</em> Trägårdh.</td>
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<td></td>
<td><em>L. echinatus</em> Berlese.</td>
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<td><em>Listropsylla dolosa</em> Rothschild, 1907.</td>
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<td><em>Dinopsyllus lypus</em> Jordan &amp; Rothschild, 1913.</td>
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<td><em>Ctenophthalmus calceatus cabirus</em> Jordan &amp; Rothschild.</td>
</tr>
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<td><em>Lophuromys flavopunctatus</em> Thomas</td>
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<td><em>Laelaps giganteus</em></td>
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<td></td>
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<td><em>L. muricola</em></td>
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<td><em>L. echinatus</em></td>
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<td><em>Listropsylla dolosa</em></td>
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<td></td>
<td><em>C. calceatus cabirus</em></td>
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<td><em>Praomys jacksoni</em> (De Winton)</td>
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<td><em>Laelaps echinatus</em></td>
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<td></td>
<td></td>
<td><em>L. muricola</em></td>
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<tr>
<td></td>
<td></td>
<td><em>Listropsylla dolosa</em></td>
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<td><em>Otomys irroratus</em> (Brants)</td>
<td>Muguga</td>
<td><em>D. lypus</em></td>
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<tr>
<td><em>Rattus rattus</em> L.</td>
<td>Muguga</td>
<td><em>X. brasiliensis</em></td>
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<tr>
<td><strong>BIRDS</strong></td>
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<tr>
<td><em>Buteo rufilatus</em> (Forster)</td>
<td>Muguga</td>
<td><em>Degeeriella fulva</em> (Giebel, 1874).</td>
</tr>
<tr>
<td><em>Pelecanus onocrotalus</em> L.</td>
<td>Ruwenzori N.P.</td>
<td><em>Piagetiella titan</em> (Piaget, 1880).</td>
</tr>
<tr>
<td><em>Pelecanus rufescens</em> Gmelin</td>
<td>Ruwenzori N.P.</td>
<td><em>P. titan</em></td>
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<td></td>
<td></td>
<td><em>Amblyomma</em> sp. N.</td>
</tr>
<tr>
<td><em>Buphagus erythrorhynchus</em> (Stanley)</td>
<td>South Horr, Kenya</td>
<td><em>R. pulchellus</em>. A. (recovered from gizzard)</td>
</tr>
</tbody>
</table>

A = Adults, N = Nymphs, L = Larvae.
*Notes and Records*

*E. larina* has a wider host range (Hubbard, 1966). A detailed account of the ecto-parasites, particularly ticks, recovered during a survey of over 400 large animal burrows in East Africa is given by Peirce (1971).

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This work was carried out whilst the author was seconded to the East African Veterinary Research Organization. I am grateful to the Director of EAVRO for permission to publish these results. The collection of fleas, mites and lice has been deposited in the British Museum (Natural History) and I would like to thank Mr F. G. A. M. Smit, Mr K. H. Hyatt and Dr T. Clay for invaluable assistance in identifying the specimens.

*References*


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