

## *Hepaticystis* in *Hypsignathus monstrosus* (Pteropinea) in Gaboon

### I. *Hepaticystis* malaria in a hammerhead bat population in Gaboon, West Africa

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**SUMMARY.** Blood smears from 142 *Hypsignathus monstrosus* collected from one site in Gaboon were examined; 139 bats showed *Hepaticystis* infection; it seems that all animals have acquired *Hepaticystis* infection by the time they are 6 months of age. Intensity of parasitemias varies according to age, sex and for females to their reproductive status.

**Hepaticystis d'*Hypsignathus monstrosus* au Gabon. I. Infection à *Hepaticystis* dans une population de *Rhinolophes* (*R. ferrum-equinum*) au Gabon.**

**RESUME.** Les frottis sanguins de 142 *Hypsignathus monstrosus* capturés au Gabon dans un même gîte ont été examinés; 139 individus étaient parasités par *Hepaticystis*; tous les animaux semblent avoir acquis leur infection avant l'âge de 6 mois. L'intensité de la parasitémie varie en fonction de l'âge, du sexe et des phases de reproduction chez la femelle.

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As part of a study of the reproductive biology of the hammerhead bat *Hypsignathus monstrosus*, we have examined for hemoparasites blood smears from 142 bats netted at a single site in Gabon between June 12 and July 29, 1974. Life-table evaluations of the population suggested that mortality was much higher than would be expected for such a large bat. Food scarcity almost certainly causes stress on reproductively active individuals and this, if compounded by widespread infectious disease, could explain the surprisingly low survival rates.

All but 3 of the 142 slides examined showed *Hepaticystis* infections. The gametocytes and tissue stages of the parasite, permitting a specific identification and designation of this as a distinct species, are described in the accompanying paper (part II).

Parasitaemias ranged from scarcely detectable to 1.0 %,  $\bar{x} = 0.03$  %. Variation in intensity according to age was slight, except for consistently lower parasitaemias in the 12 to 14 month old cohort ( $\bar{x} = 0.06$  %) and in older females. Overall parasitaemia was lower in females ( $\bar{x} = 0.09$  %,  $n = 71$ ) than males ( $\bar{x} = 0.17$  %,  $n = 61$ ), and this was especially noticeable in animals 18 months or older: 0.08 % in females versus 0.2 % in males. Intensity was also lower in pregnant (0.05 %,  $n = 24$ ) than in reproductively inactive females (0.14 %,  $n = 22$ ) and intermediate in females carrying young (0.10 %,  $n = 24$ ).

Apparently, in this population nearly all animals have already acquired *Hepaticystis* infections by the time they are 6 months of age. This seems well suited to accommodate the parasite to a host population with such high reproductive rate (2 young per year per female) and rapid population turnover.

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La 2<sup>e</sup> partie de cet article a déjà paru dans les *Annales de Parasitologie*, 1980, t. 55, n<sup>o</sup> 5, pp. 485-490, en raison d'irrégularité du courrier postal.

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