

## NOTES ET INFORMATIONS

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### ***EIMERIA GUNDII* n. sp. (PROTOZOA : EIMERIIDAE) FROM TUNISIAN GUNDI (*CTENODACTYLUS GUNDI*)**

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In 1974-75 during the course of survey work on the endoparasites of wild tunisian rodents (1) seventeen gundi were captured in the southern region of Tunisia. These animals were brought alive to the Pasteur Institute, Tunis where faecal examinations of each individual were carried out. Eleven of these animals were found to be carrying coccidial oocysts and in all of them the examinations revealed the eggs of nematodes and cestodes.

The gundi (*fig. 1*) belongs to the sub-order Hystrichomorpha Brandt, 1855 and the Family Ctenodactylidae Zittel, 1893. This animal is grey in colour, possesses stumpy hairy tail and inhabits the rock crevices in arid desertic or sub-desertic area of north Africa.

In further studies a concentration of oocysts was obtained by a centrifugal flotation technique using saturated solution of saccharose. The meniscus of the solution was aspirated by means of a Pasteur pipette and stored in a petri-dish for culture. To it was added a small quantity of distilled water to dilute the saccharose and a few drops of 2,5 percent sulphuric acid to prevent the growth of extraneous micro-organisms. Sporulation of the oocysts, at room temperature, was carried out in half closed petri-dishes which was complete on the fourth day of culture. In all 20 oocysts (unsporulated and sporulated) 10 sporocysts, 8 sporozoites and 10 oocystic residuum could be measured.

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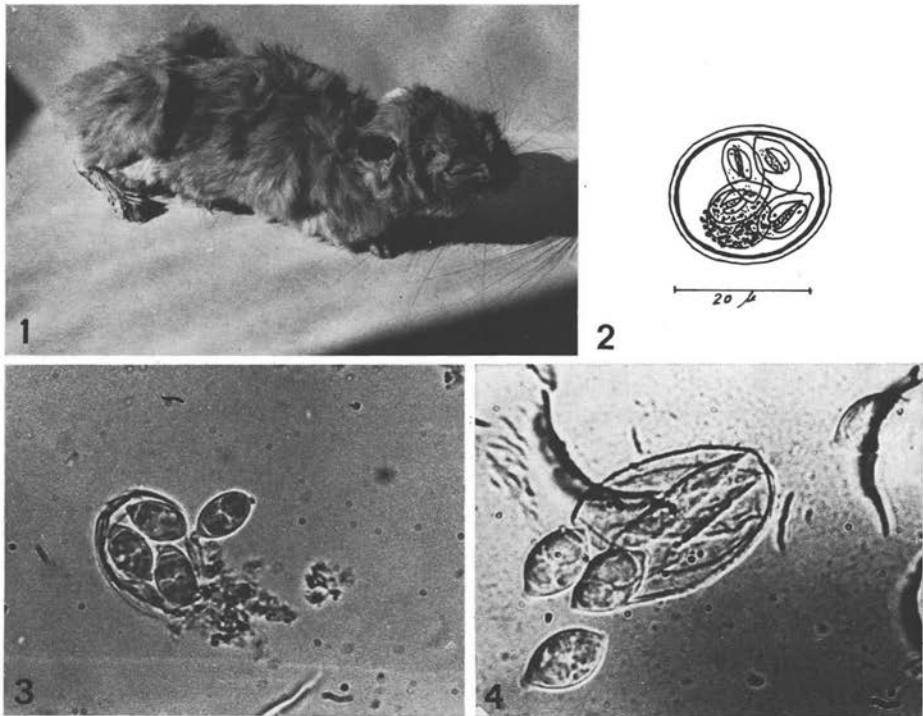


Fig. 1. — Photo of a gundi *Ctenodactylus gundi* measuring 19 cm long.

Fig. 2. — Camera lucida drawing of sporulated oocyst.

Fig. 3. — Microphoto of sporulated oocyst showing emergence of oocystic residuum and sporocysts ( $13 \times 40$ ).

Fig. 4. — Microphoto of sporulated oocyst showing emergence of four sporocysts magnified view. Note the stieda body ( $13 \times 95$ ).

The gundi coming from saharian region were unable to survive in the laboratory environment for very long. Following their death, post-mortem examinations were conducted. From the intestinal lumen, nematodes belonging to the families Trichostrongylidae, Trichuridae, Oxyuridae and a cestode of family Hymenolepididae were recovered. A portion of the ileum was fixed in 10 percent formalin and later on processed for histological examination. After staining the sections with eosin and hematoxylin the presence of a few scattered oocysts in the intestinal mucosa were observed. No endogenous stages of coccidia, however, could be detected in such sections.

The morphological characters of the oocysts were as follows; the broadly elipsoidal to sub-spherical oocysts (fig. 2) measured 20-27 by 18-23  $\mu$  (average 23,6 by 20,3  $\mu$ ). The oocyst wall 1-1,5  $\mu$  thick is composed of a dark inner and a transparent outer layer, the latter being the thinner of the two layers. No micropyle was observed. The sporont occupied almost all the inner area of the oocyst. No polar granule arises. Oocystic residuum of 8-10  $\mu$  dimensions masked the ovoid sporocysts which measured 9-12 by 5-7  $\mu$

(average 10,6 by 6,6  $\mu$ ). The stieda body was visible at the narrower end of the sporocyst (fig. 3, 4). The sporozoites measuring 6-8 by 2,5-3  $\mu$  surround a small compact granular residuum.

REMARKS:

On consultation of the standard literatures on coccidiosis (2) no references could be found to species of *Eimeria* in *gundi*. We attribute this species to *Eimeria gundii* n.sp. in the rodent host *Ctenodactylus gundi*.

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References

1. MISHRA (G.-S.) et GONZALEZ (J.-P.), 1975. — Bilan d'une étude sur les endoparasites du Rat, *Rattus norvegicus*, Berkenhout, 1769, à Tunis. *Arch. Inst. Pasteur Tunis*, 52, 71-88.
  2. PELERDY (L.), 1974. — Coccidia and Coccidiosis. *Verlag Paul Parey*, Berlin and Hamburg, 959 p.
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