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Hemoflagellates in *Cyrtodactylus kotschy* (Steindachner, 1870) (Reptilia, Gekkonidae) in Italy

Short communication

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Many species of lizards of the Mediterranean basin have been found naturally infected with hemoflagellates. *Tarentola mauritanica* L. in particular has been studied. In this species, Catuillard (1909) found a parasite which he described as *Trypanosoma platydactyli*. In 1915 Sergent et al. found trypomastigotes and amastigotes in blood smears and obtained epimastigotes and trypomastigotes from blood cultures. In 1921 Wenyon described *Leishmania tarentolae*. After these early reports, many other authors found *T. mauritanica* infected with hemoflagellates (Chatton and Blanc, 1918; Laveran and Franchini, 1921; Adler and Theodor, 1931, 1935; Parrot and Foley, 1939; Rioux et al., 1969).

During a survey on hemoflagellates of *T. mauritanica* with the purpose of isolating and studying the in vivo growth of these parasites, we also examined some specimens of *Cyrtodactylus kotschy* (Steindachner, 1870), a small gecko which cohabits with *T. mauritanica*, collected in Murge, Apulia (Italy).

Four specimens of *C. kotschy* collected at the end of August 1981 have been examined. Blood of the heart of lizards, taken aseptically with a fine sterile Pasteur pipette, was partly inoculated into biphasic media (Tobie modified by Evans, Evans, 1978) and partly smeared on slides and stained with Giemsa's stain. Microscopic observation of blood smears revealed trypomastigotes (1 parasite/40–50 microscopic fields) (Fig. 1A) and a very small number of amastigotes (Fig. 1B) in one specimen (Ck3). Blood cultures from this specimen only, which had been found negative at day 6, showed a good growth of promastigotes at day 7 from first sub-inoculation.

The isolate (G/IT/81/Ck3-ISS24) was sent for isoenzyme analysis to the Laboratory of Ecologie Médicale of Montpellier, France, and was identical to the reference strain of *L. tarentolae* Wenyon 1921 (LV414).

This is the first report of hemoflagellates from *C. kotschy*, though Latysev and Pozyvaj (1937) isolated *L. gymnodactyli* from *Cyrtodactylus* (syn. *Gymnodactylus*) *caspius*, collected in the Murgab River Valley, Turkmenia, USSR.

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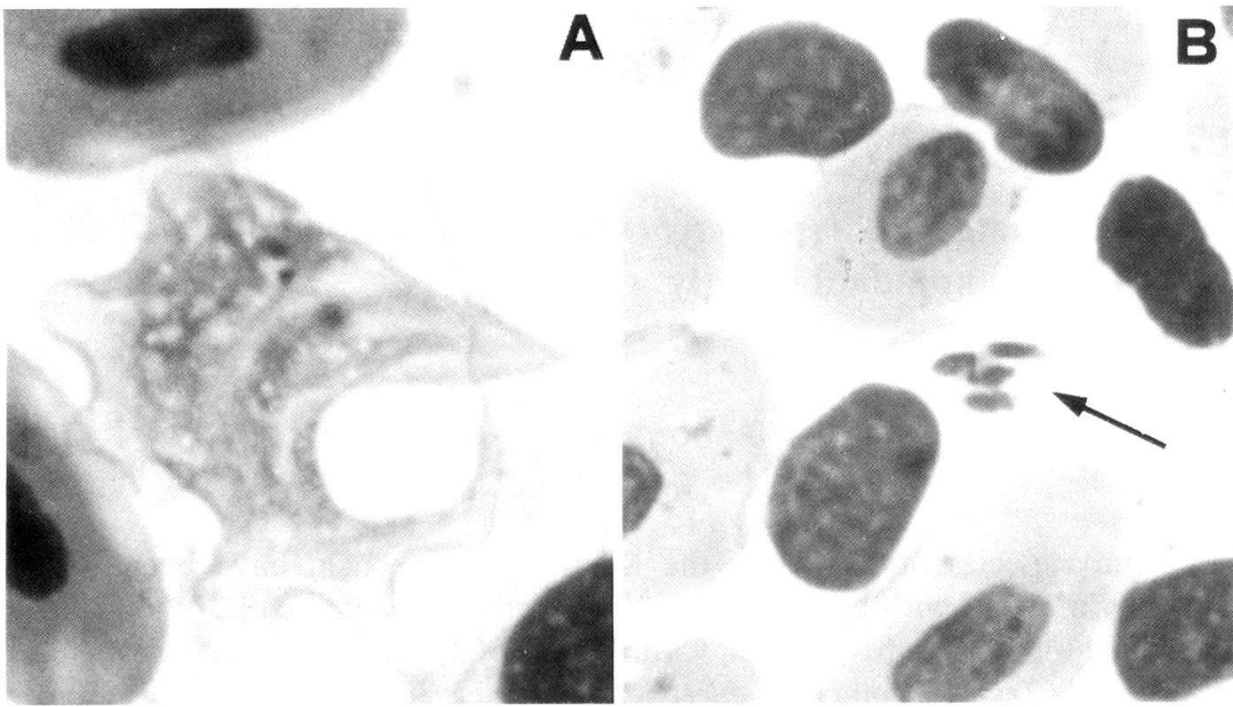


Fig. 1. A. Trypomastigote and B. amastigotes (→) in the blood of *Cyrtodactylus kotschy* (1000×).

It is also the first report of *L. tarentolae* in a species different from *T. mauritanica*. More specimens of *C. kotschy* should be examined to confirm the presence of this parasite in the gecko population of this species.

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- Adler S., Theodor O.: Investigations on Mediterranean Kala Azar. IV – Infection of sandflies with *Leishmania infantum*. Natural parasites of wild sandflies in Catania. Observations on *Trypanosoma ptyodactyli* Catouillard. Proc. roy. Soc. (Lond.), Ser. B 108, 492–493 (1931).
- Adler S., Theodor O.: Investigations on Mediterranean Kala Azar. X – A note on *Trypanosoma platyodactyli* and *Leishmania tarentolae*. Proc. roy. Soc. (Lond.), Ser. B 116, 543–544 (1935).
- Catouillard G.: Sur un trypanosome du gecko commun de Tunis (*Platydactylus muralis*). C. R. Soc. Biol. 67, 804–805 (1909).
- Chatton E., Blanc G.: Le *Leptomonas* de la tarente dans une région indemne de Bouton d'Orient. Observations et expériences. Bull. Soc. Path. exot. 11, 595–609 (1918).
- Evans D. A.: Kinetoplastida. In: Methods of cultivating parasites in vitro, ed. by A. E. R. Taylor and J. R. Baker, p. 55–88. Academic Press, London/New York/San Francisco 1978.
- Latysev N. I., Pozyvaj T. T.: Experience of epidemiological investigations in places in Turkmenia where cutaneous leishmaniasis occurs. In: Problemy parazit. i fauny Turkmenii, p. 163–181 (1937).
- Laveran A., Franchini G.: Des hématozoaires du gecko et spécialement de *Herpetomonas tarentolae*. Procédé simple de culture des *Herpetomonas*. Bull. Soc. Path. exot. 14, 323–326 (1921).
- Parrot L., Foley H.: Sur la fréquence de la leishmaniose du gecko dans le sud Oranais. Arch. Inst. Pasteur Alger 17, 231–232 (1939).
- Rioux J. A., Knoepfler L. P., Martini A.: Présence en France de *Leishmania tarentolae* Wenyon 1921 parasite du gecko *Tarentola mauritanica* (L. 1758). Ann. Parasit. hum. comp. 44, 115–116 (1969).
- Sergent Edm., Sergent Et., Lemaire G., Senevet G.: Hypothèse sur le phlébotome «transmetteur» et la tarente «Reservoir de virus» du Bouton d'Orient. Ann. Inst. Pasteur 29, 309–322 (1915).
- Wenyon C. M.: Observations on the intestinal protozoa of three egyptian lizards, with a note on a cell-invading fungus. Parasitology 12, 350–365 (1921).