

Report on the earthworms of the Réserve naturelle régionale Trésor, Montagne de Kaw, French Guiana

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Voucher specimens deposited in: Hungarian Natural History Museum,
Budapest

The report is based on identified earthworms from the collections listed in Table 1 below. Additional material has been collected from the Montagne de Kaw (camp Caïman) and the surroundings (locality marked on the map as Montagnes de Roura). It will be reported later.

Altogether, 10 samples were studied (Table 1). Eight samples were collected by soil digging, one sample represents specimens collected mostly under the bark of trees and under logs. *M. duodenarius* was collected in the litter layer. Eight species representing two earthworm families were found in the material recorded (Table 2).

Native and introduced species

Out of all recorded species, one was probably introduced to the Trésor reserve whereas the remaining are native species (Table 2). Interestingly, five (71%) among the native species are new species to science. They will be described shortly. The specimen named as Gen. nov. (Table 2) represents a new genus that will be also described. However, this specimen collected in the Trésor reserve is juvenile and cannot be identified up to the species level. According to our present knowledge, the new genus comprises three to four species in French Guiana. The specimens named *Holoscolex* sp. nov. or gen. nov. (Table 2) represent new species to science, and possibly a new genus as well.

Uniqueness of the Trésor reserve

The following specimens can be considered so far as unique findings limited to the Trésor reserve: *Martiodrilus* sp. nov1. (Fig. 1), *Holoscolex* sp. nov. or gen. nov., and *Wegeneriona* sp. nov.. Unfortunately, both collected specimens of *Martiodrilus* sp. nov1. are juveniles and cannot be used to describe this new species.

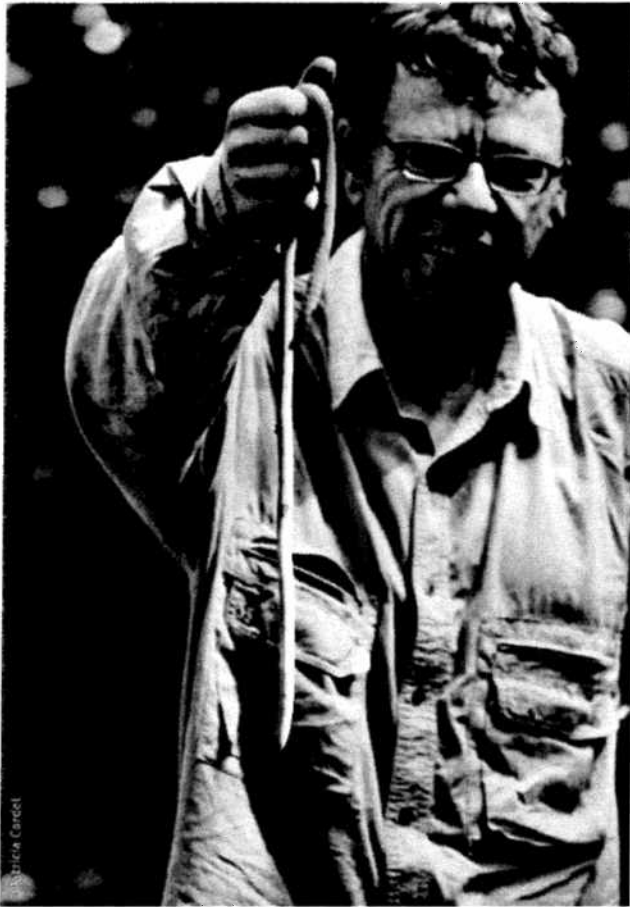


Figure 1. *Martiodrilus* sp. nov1.
collected in the Trésor reserve.

Photo: Patricia Cardet

Species invasion

Pontoscolex corethrurus is a highly invasive species of South American origin and has already been recorded in 56 tropical countries around the world (Fragasso et al. 1999: In: Lavelle P., Brussaard L. and Hendrix P. (Eds.), Earthworm management in tropical agroecosystems. CABI Publ.). The successful establishment of this species is often the result of habitat disturbance due to human intervention or natural causes (e.g. extensive drought, fire). The sample from the Maya 1 forest indicates that the ongoing

competition between native soil species (*Martiodrilus* sp. nov2.) and invasive soil *P. corethrurus* cannot be excluded.

Conclusions

In spite of the very limited collection effort up to now, the results indicate that the Trésor reserve harbours a rich autochthonous earthworm fauna, including many species unknown to science. Probably, some of the recorded species might be endemic in a small distribution area. However, the presence of *P. corethrurus* indicates that an effort to limit the risk of successful invasions by alien earthworm species is needed.

Table 1. Details about earthworm collections done in Réserve de Trésor, Mt. Kaw, French Guiana

Locality / Collected by	Date / Coordinates	Species / Number of specimens
Maya 1 – Savane / O. Tostain		- <i>Pontoscolex corethrurus</i> / 26 juveniles
Maya 3 – Savane / O. Tostain		- <i>Pontoscolex corethrurus</i> / 3 juveniles
Maya 4 – Savane / O. Tostain		- <i>Pontoscolex corethrurus</i> / about 30 specimens
Maya 1 – Forest / O. Tostain		- <i>Martiodrilus</i> sp.n. 2 / 7 specimens - <i>Pontoscolex corethrurus</i> / 1 adult + 150 juveniles
Maya 2 – Forest / O. Tostain		- specimens not well preserved
Maya 3 – Forest / O. Tostain		- <i>Pontoscolex corethrurus</i> / 2 adults + 52 juveniles
Maya 4 – Forest / O. Tostain		- <i>Pontoscolex corethrurus</i> / 4 adults + 54 juveniles
Maya 5 – Forest / O. Tostain		- <i>Pontoscolex corethrurus</i> / 2 adults + 28 juveniles
Réserve Trésor. Upper part of the Reserve / T. Pavlicek	June 26–27, 2009 / 04°36'N, 52°16'W, about 250 m asl.	- <i>Martiodrilus</i> sp. nov1. / 2 juveniles - <i>Wegeneriona beleensis</i> / 4 adults - <i>Wegeneriona</i> sp. nov. / 7 adults - <i>Holoscolex</i> cf n. gen /9 adults - <i>Nouraguella</i> n. gen. / 1 juvenile
Montagne de Kaw rainforest / T. Pavlicek	December 20, 2008	- <i>Martiodrilus duodenarius</i> / 1 specimen

Table 2. List of earthworm species identified at the Trésor reserve,
Montagne de Kaw, French Guiana

Species	Comment	Origin
Family: Glossoscolecidae		
<i>Martiodrilus</i> sp. Nov1	- collected under logs	Native
<i>Martiodrilus duodenarius</i> (Michaelsen, 1917)	- anéciques	Native
<i>Martiodrilus</i> sp. nov2	- anéciques	Native
<i>Pontoscolex corethrurus</i> (Müller, 1856)	- endogéic	Introduced
Gen. nov.	- in highly cellulotic substrates	Native
Family: Dichogasteridae		
<i>Wegeneriona beleensis</i> Righi, 1988	- under bark	Native
<i>Wegeneriona</i> sp. nov.	- under bark	Native
<i>Holoscolex</i> sp. nov. or gen. nov.	- under bark	Native

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