

## Project Update: February 2017

From our work on impact of land use and forest disturbance on millipede diversity and distribution in the forests of the littoral region of Cameroon, a total of 22 species of millipede was recorded belonging to eight families, namely Pachybolidae, Spirostreptidae, Odontopygidae, Chelodesmidae, Trychopolydesmidae, Stemmiulidae, Cryptodesmidae and Pyrgodesmidae. Two new records of millipede species, *Stemmiulus beroni* and *Pachybolus tectus*, for Cameroon were added from the current study, these species were previously known only from their type locality. Out of eight families, Pyrgodesmidae was the most dominant family in term of the number of species (five species), followed by Oxydesmidae and Spirostreptidae (four species). Chelodesmidae, Pachybolidae, Stemmiulidae and Cryptodesmidae had the lowest number of species (one species each). *Trichochalepuncus* sp. was the most abundant species (38.68 % of total abundance) followed by *Monachodesmus longicaudatus* (12.75 %) and *Urodesmus cornutus* (8.23 %).



Figure 1: *Paracordyloporus porati*



Figure 2: *Telodeinopus cananiculatus*

The results obtained during these first months of sampling show that the degradation of forest cover has an effect on the millipede fauna composition and community structure in the littoral forest of Cameroon. We noted that *Urodesmus cornutus*, *Monachodesmus longicaudatus*, *Coenobothrus bipartitus*, and *Trichochalepuncus* sp. (probably a new species) colonise all types of habitat, thus suggesting that they are generalists. Abundances of these species seems to increase with increasing degradation of the forest cover. *Stemmiulus beroni*, *Laciniogonus* sp., *Spheroparia integratus* and *Spirostreptus pancratius* are found in closed to relatively stable and non-degraded forest of Djawara. *Paracordyloporus porati* (Figure: 1) and *Aporodesmus minimus* were found only in the low degraded secondary forests of Ekite. We noted that *Telodeinopus cananiculatus* (Figure: 2), *Coromus* sp.1 and *Coromus* sp.2 are exclusive to the very degraded forests of Yansoki.

The major threats to the fauna of millipede in the littoral forest of Cameroon are bushfire (Figure 3) agricultural practices, clear-cuts for the production of charcoal, cocoa plantations and palm oil. Furthermore, artisanal timber exploitation and overuse of insecticides exacerbate the effects on millipede populations. Sensitising of local populations and record of their perception about the effect of land use practice and deforestation on millipedes suggests that the people of the littoral forest of Cameroon know millipede and use them for several purposes.



Figure 3: bushfire near Ekite Forest



Figure 4: clear-cuts of forest for cocoa plantations (Djawara)

Among the 20 people interviewed to date, we maintain that millipedes are suitable indicators of the degree of transformation of forest ecosystems. On this subject, the people report that some species of millipede dominate the fields and fallow while others are found in forests only. Others people report that some species of diplopods indicate the arrival of the dry season. Communities also use millipede in the treatment of certain diseases such as haemorrhoids, ringworm, and certain incurable wounds.



Figure 5: collecting sample



Figure 6: Artisanal Exploitation of Azobe (*Lophira alata*)

A presentation on the importance of millipede and description of a new and already endangered species of millipede from Cameroon was made during the 23rd Annual Conference of the Cameroon Bioscience Society. Theme: Biosciences and Integrated Management of Living Systems. Université des montagnes, Bangangté-Cameroun, from November 29th - December 3rd 2016 (poster).

In the coming months, we intend to continue sampling and sensitisation of riparian human populations of the prospected forests in order increase conservation of their environment, especially invertebrates, such as millipedes, which have a major role in organic matter recycling in forests. The results will shade light on how land use practices influence species diversity and distribution patterns, and provide a basis for comparison to examine millipede diversity and provide data to mitigate forest transformation in the littoral forest of Cameroon.