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Four threatened fungal species: a step toward the global conservation action of fungi in Benin (West Africa)

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Nowadays, human activities pressure on the vegetation have increased. This study aims to determine the most endangered fungi species in Benin and their partner's trees. The data was collected in the Sudanian region of Benin. Six vegetation groups dominated by *Afzelia africana*, *Berlinia grandiflora*, *Isoperlinia doka*, *Isoperlinia tomentosa*, *Uapaca somon* and *Uapaca togoensis* have been identified for data collection. Twelve transect of 3 km long and 100 m wide were installed in four forest. Each two days, on each transect, all ectomycorrhizal fungi have been collected during June-October. The data have been combined with Benin global fungal data (2003-2017), harvested under the same conditions. Three main factors were considered in the analysis for the determination of rare species namely: each fungal species, its area of occupancy, and potential threats

to these habitats. Global diversity shows that, most than 9803 specimens were collected, herborized and stored in the mycological herbarium of the University of Parakou. The genus such as *Amanita*, *Cantharellus*, *Lactifluus*, *Lactarius* and *Russula* are the most dominant. *Cantharellus solidus*, *Lactifluus luteopus*, *Amanita xanthogala* and *Russula pellucida* have been identified as critically endangered in Benin. The Canonical Correlation Analysis show that the endangered species remain in symbiosis relationship with forest trees such as *Berlinia grandiflora*; *Isoperlinia doka*; *Monotes kerstingii* and *Uapaca guineensis*. The local populations must therefore limit the threats on these partner trees to avoid the disappearance of these fungal species

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