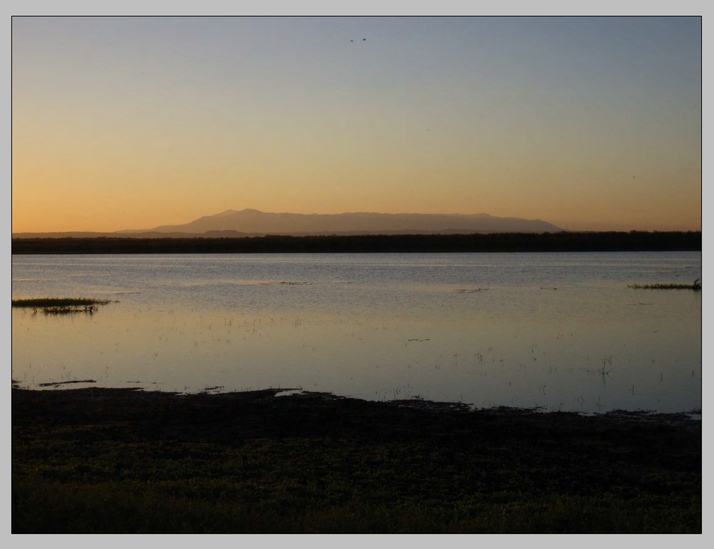


Mount Gorongosa.

The collectors. From left to right: Teresa Iturriaga, Leif Ryvarden, Meg Coates Palgrave, Jason Karakehian.

A survey of **fungi** in Gorongosa National Park, **Mozambique**.

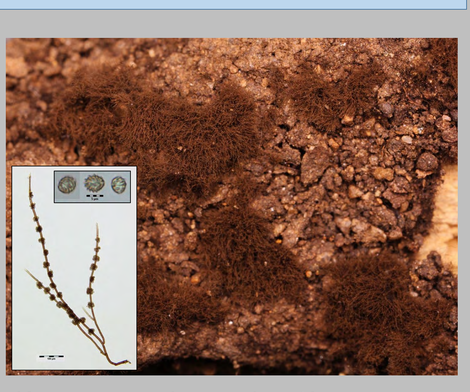
Jason M. **Karakehian**[1], Luis **Quijada**[2], James K. **Mitchell**[3], Teresa **Iturriaga**[4], Leif **Ryvarden**[5], Andrew N. **Miller**[6], Daniel **Radaubaugh**[6], Rosanne **Healy**[7], Matthew E. **Smith**[7], Donald H. **Pfister**[2].

Sarophorum palmicola, anamorph of ***Penicilliopsis clavariiformis*** (Ascomycota, Eurotiales) emerging from the soft spot of a rotting fruit of the palm *Hyphaene coriacea.*

Coniodictyum chevalieri (Basidiomycota, Exobasidiales), parasite of *Ziziphus mucronata* fruits. Ours is the first report of this fungus in Mozambique. Insert: (R) basidiospores.

Gorongosa National Park (GNP) was a frequent battleground during the Mozambican Civil War (1977-1992) and was left unprotected for a decade after cessation of hostilities. In that time, the Park's fauna was decimated. Today, restoration of the wildlife and tourist infrastructure is advancing apace with support from the Gregory C. Carr Foundation. The establishment of the E. O. Wilson Biodiversity Laboratory in the Park, modeled along the lines of the Smithsonian Tropical Research Institute on Barro Colorado Island in Panama, provided an attractive research destination.

Rhytidhysteron rufulum (Ascomycota, Patelariales). Ubiquitous, on dead twigs and branches. This image shows living, hydrated ascomata. Inserts: (lower) ascomata in arid conditions; (upper) living ascospores.



Kumanasamuha sundara (Ascomycota, Pezizales). Teleomorph referable to *Trichaleurina*. On rotted wood. Insert: conidiophore with whorls of "conidiophore initials" that give rise to conidiogenous cells; conidia (upper right).

Eremiomyces echinulatus (Ascomycota, Pezizales), a semi-hypogeous truffle. Insert: ascospores.

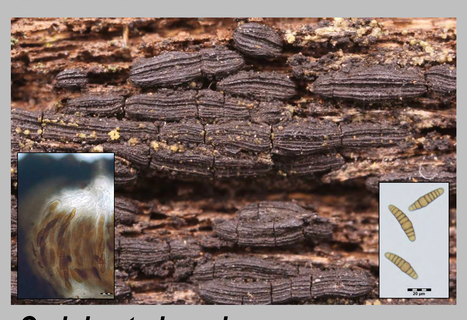
Hermatomyces reticulatus (Ascomycota, Pleosporales) on rotten wood. Insert: conidium. Sexual morph unknown.

Pseudopiptoporus devians (Bres.) Ryvarden, encircling the butt of a living *Sclerocarya birrea* tree, with the author of the combination standing to the right. Ryvarden erected the genus in 1980 based only on the type collection that had been made in 1913 in Zumba, Tete Province, Mozambique – far northwest of GNP near the Zimbabwean border. This is the first known collection since that date.

Microporus quarrei (Basidiomycota, Polyporales). On dead wood. Insert: detail of pore surface.

Hexagonia hydnoides (Basidiomycota, Polyporales). On dead wood. Inserts: (L) detail of hairs on upper surface; (R) detail of pore surface.

Flavodon flavus (Basidiomycota, Polyporales). Insert: detail of hymenial surface.



Oedohysterium sinense (Ascomycota, Hysteriales). Inserts: (L) longitudinal section of an ascoma, detail of centrum; (R) ascospores.

Mystery fungus! (Dothideomycetes, Pleosporales). Ascomata covering trunk and branches of fallen sapling. Pseudoperithecia developing within stromatic tissue (upper left insert, detail of section shown in upper right insert). Lower right insert: ascospores (stacked image). Asci clearly bitunicate with an extensible endoascus. Pseudoparaphyses frequently anastomosing, forming a net-like tissue. Do you know this fungus? Please write in your ideas **here** with your name and email address. Thanks! _____

Dicephalospora rufocornea (Ascomycota, Helotiales). On mid-veins and petioles of well-rotted leaves.

Humphreya eminii (Basidiomycota, Polyporales). A root pathogen. Inserts: (L) two different focal-level views of a basidiospore.

(L) A small termite mound. (R) A view down the opening of one of the mounds reveals ***Termitomyces* sp.** colonies at the bottom of the "shaft" (specimen not collected).

We conducted a fungal survey of GNP in June-July of 2016. Our survey was conducted in the beginning of the dry season and our collections represent species in fruit during a season that is not often sampled. We collected voucher specimens at random localities and habitats within the Park, focusing on discomycetes, polypores and anamorphic fungi. Despite a severe drought that had affected the region that year, we made over 500 collections.

We are currently making determinations of these and will publish our results in the form of a checklist. Voucher specimens will be deposited at the Biodiversity Collection at the E. O. Wilson Biodiversity Laboratory at GNP, the Herbarium of Eduardo Mondlane University in Maputo (LMU), the Farlow Herbarium (FH) at Harvard University and the University of Illinois Herbarium (ILL).

Ryvarden (Synopsis Fungorum 38: 20-24, 2018) published a modern checklist of Mozambican polypores and crust fungi along with the following new species: *Inonotus globosporus, Antrodiella ochracea, Perennioporia minutissima, Porogramme azurica.*

Our work will stimulate future studies of the Park's mycobiota and become the cornerstone of a systematic fungarium within the Biodiversity Collection. This would be the first such collection housed at any African National Park. Furthermore, we hope that a baseline understanding of fungal species and their activities in GNP will help to inform current decisions around Park conservation and allotment of resources.

Collema pulchellum var. subnigrescens (Ascomycota, Peltigerales). Lichen. Insert: longitudinal section through an apothecium in phloxine.

Hypoxylon haematostroma (Ascomycota, Xylariales). Ubiquitous on rotten wood. Insert: detail of stroma showing ostioles of perithecia.

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