

Entomopathogenic FUNGI of the Rio Napo Lowlands (Ecuadorian Amazon)

Susanne Sourell, João P.M. Araújo, Tatiana Sanjuan, Priscila Chaverri and Julia Simon Cardoso

Sani Isla Community is located on the borders of the Yasuní National Park and Cuyabeno Natural Reserve in the Ecuadorian Amazon rainforest. The Sani Isla Forest consists of 42,000 hectares of primary moist lowland Amazonian rainforest with an annual rainfall of ~3,200 mm. Soils are mostly geologically young, fluvial sediments from erosion of the Andes. The forests in this area are heavily endangered by human activities such as drilling for oil and deforestation. Photos by S. Sourell, except where indicated. Produced by: S. Sourell with support from Rich C. Hoyer, Carlos Hualinga, Danny Gualinga, Cesar Licuy, Franklin Licuy and The Field Museum, Chicago, USA. [susanne.sourell@yahoo.com] [fieldguides.fieldmuseum.org] [1136] version 1 3/2019

➔
Hymenoptera
(Formicidae)
- Ants -

Fungi are grouped by
the insect hosts'
common English name



1 *Ophiocordyceps* sp.
Hirsutella group



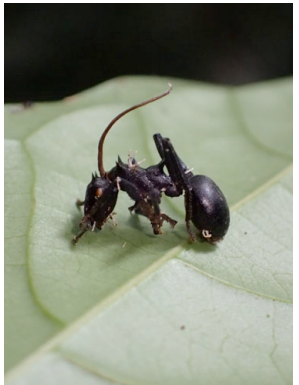
2 *Ophiocordyceps*
australis complex



3 *Ophiocordyceps*
australis complex



4 *Ophiocordyceps*
camponoti-atricipis



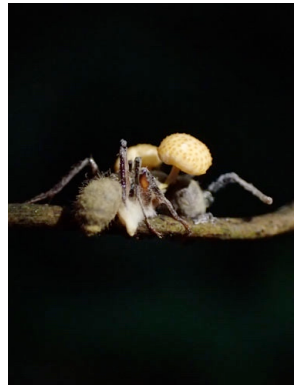
5 *Ophiocordyceps kniphofioides*
Polycephalomyces infected



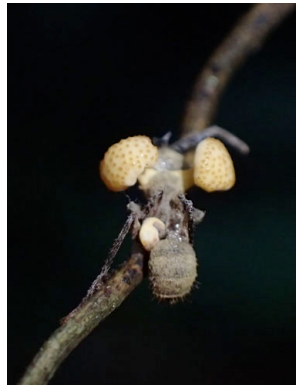
6 *Ophiocordyceps kniphofioides*
Polycephalomyces infected



7 *Ophiocordyceps*
kniphofioides group



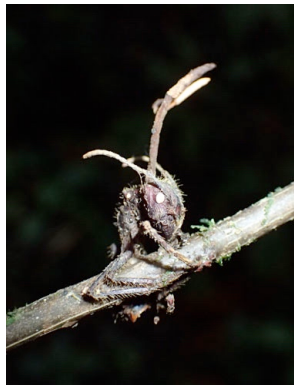
8 *Ophiocordyceps lloydii*
var. *binata*



9 *Ophiocordyceps lloydii*
var. *binata*



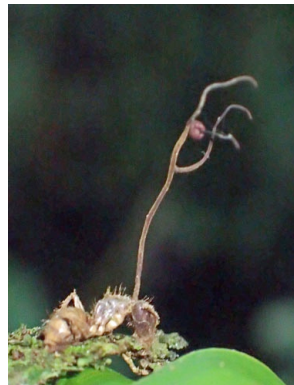
10 *Ophiocordyceps*
lloydii



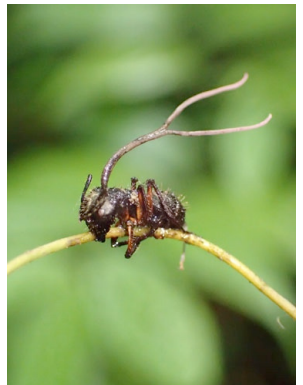
11 *Ophiocordyceps*
ponerinarum



12 *Ophiocordyceps*
ponerinarum



13 *Ophiocordyceps*
unilateralis group 1



14 *Ophiocordyceps*
unilateralis group 2



15 *Polycephalomyces*
formicarum cff.



16 *Polycephalomyces*
formicarum cff.

➔
Coleoptera
- Beetles -



17 *Nigelia*
martiale (©TL)



18 *Nigelia*
martiale (©DW)

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19 *Nigelia martiale*



20 *Ophiocordyceps curculionum* s.l. (©DW)



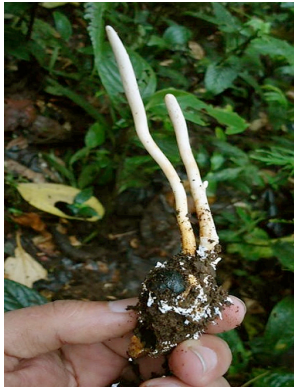
21 *Ophiocordyceps curculionum* complex



22 *Ophiocordyceps gracilioides* (©TL)



23 *Ophiocordyceps melolonthae* (©CP)



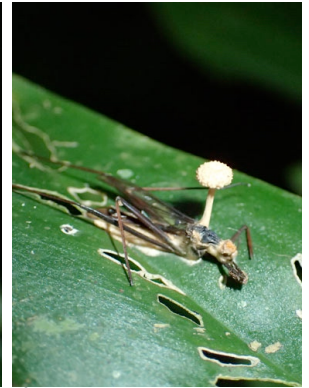
24 *Ophiocordyceps melolonthae* complex (©CP)



25 *Ophiocordyceps dipterigena* (©TL)



26 *Ophiocordyceps dipterigena*



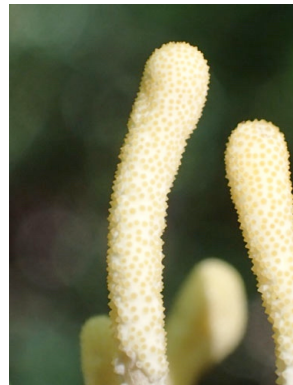
27 *Ophiocordyceps* aff. *dipterigena*



24 *Ophiocordyceps melolonthae* complex (©CP)



28 *Beauveria acridophila*



29 *Beauveria acridophila*



30 *Beauveria locustiphila*



31 *Beauveria locustiphila*



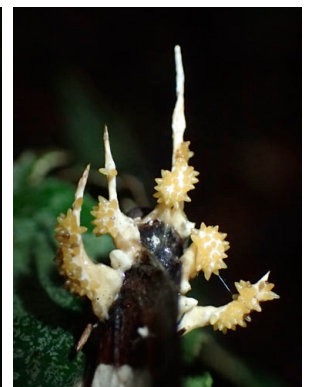
32 *Ophiocordyceps amazonica*



33 *Ophiocordyceps amazonica*



34 *Akanthomyces* cf. *pistillariformis*



35 *Akanthomyces tuberculatus* s.l.

→
Diptera
- Flies -

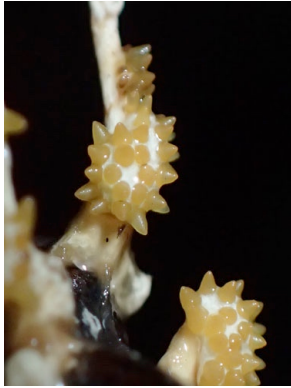
→
Orthoptera
- Grasshoppers /
Locusts -

→
Lepidoptera
- Moths / Butterflies -

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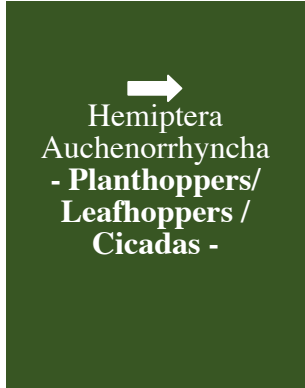
36 *Akanthomyces tuberculatus* s.l.



37 *Blackwellomyces cardinalis* (©JP)



38 *Cordyceps tenuipes*



Hemiptera
Auchenorrhyncha
- Planthoppers/
Leafhoppers /
Cicadas -



39 *Calcarisporium* sp.



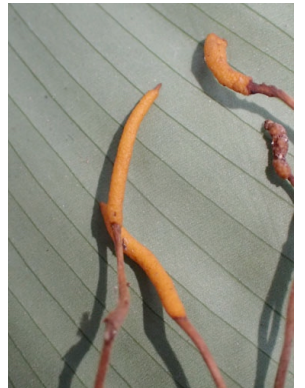
40 *Ophiocordyceps* sp.
Hirsutella group



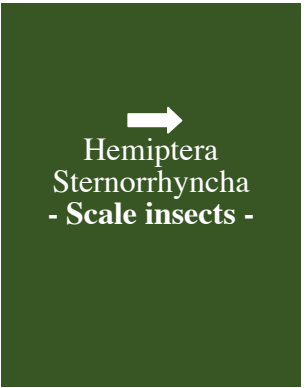
41 *Ophiocordyceps fulgoromorphila*



42 *Ophiocordyceps* aff.
fulgoromorphila



43 *Ophiocordyceps* aff.
fulgoromorphila



Hemiptera
Sternorrhyncha
- Scale insects -



44 *Hyperdermium bertonii*



45 *Hypocrella hirsuta*



46 *Moelleriella*
cf. *cornuta*



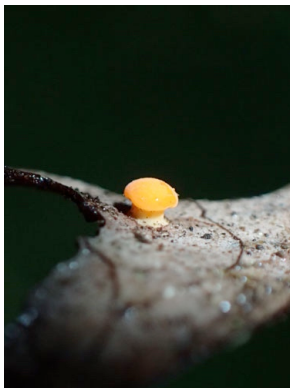
47 *Moelleriella evansii*



48 *Moelleriella disjuncta*



49 *Moelleriella ochracea*



50 *Moelleriella phylogena*



51 *Moelleriella turbinata*



Arachnida
- Spiders /
Harvesters -



52 *Cordyceps caloceroides* (©JP)

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53 *Cordyceps caloceroides*



54 *Cordyceps nidus*



55 *Cordyceps nidus*



56 *Gibellula leiopus*



57 *Gibellula cf. pulchra*



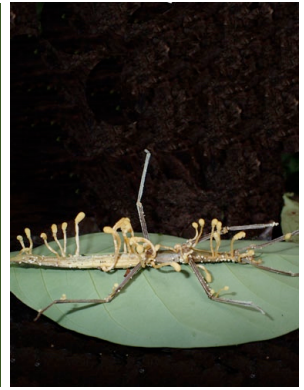
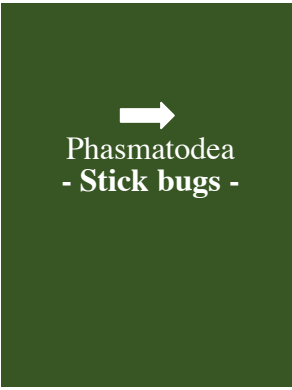
58 *Ophiocordyceps engleriana*



59 *Ophiocordyceps engleriana*



60 *Torribiella gonylectica*



61 *Beauveria diapheromeriphila*



62 *Beauveria diapheromeriphila*



63 *Ophiocordyceps humbertii* (©CP)



64 *Ophiocordyceps* sp. *Hirsutella* group



65 *Ophiocordyceps* sp. *Hirsutella* group



66 *Ophiocordyceps sphecocephala* group



67 Sani Isla Forest



68 Sani Isla Forest



69 Rio Napo river Parque Nacional Yasuní

Acknowledgements

We would like to express our thanks to Nigel Hywel-Jones for the identifications contributed, Jens Petersen (JP), Thomas Laessoe (TL), Daniel Winkler (DW) and Carlos Padilla (CP) to permit use of their pictures.

Further we are grateful to Rich C. Hoyer, Carlos Hualinga, Danny Gualinga, Cesar Licuy and Franklin Licuy for the assistance in the field as well as the team of Sani Lodge and Mercedes Rivadeneira for the great hospitality.

Notice

None of the fungi in this guide were analyzed microscopically and identification of genus and species were based on photographs.