Sveriges Mykologiska Förening

Fungi of sandy habitats

Mikael Jeppson
Sveriges Mykologiska Förening

SandLife 22 May 2018
Kristianstad

Life strategies

- **Mycorrhizal**
- Forest trees /Pinus

- *Aureoboletus projectellus (sopp)*
- *Tricholoma* spp (musseroner)
- *Scleroderma septentrionale* (sandrottryffel)
- *Hydnellum/Sarcodon* spp (taggsvampar)

- **Saprotrophic**

- Open and dry habitats
- Exposed to sun, wind

- **Gasteroid fungi** (earthstars, puffballs, stalked puffballs)

- **Agaricoid fungi** adapted to dry conditions (eg. *Crinipellis scabella* - stråbroskskivling)

Mycorrhizal fungi

Scleroderma septentrionale NT

sandrottryffel

Aureoboletus projectellus

Tricholoma equestre - riddarmusseron

Saprotrophic gasteroid fungi

Geastrum pseudostriatum EN

Disciseda candida VU

Tulostoma brumale NT

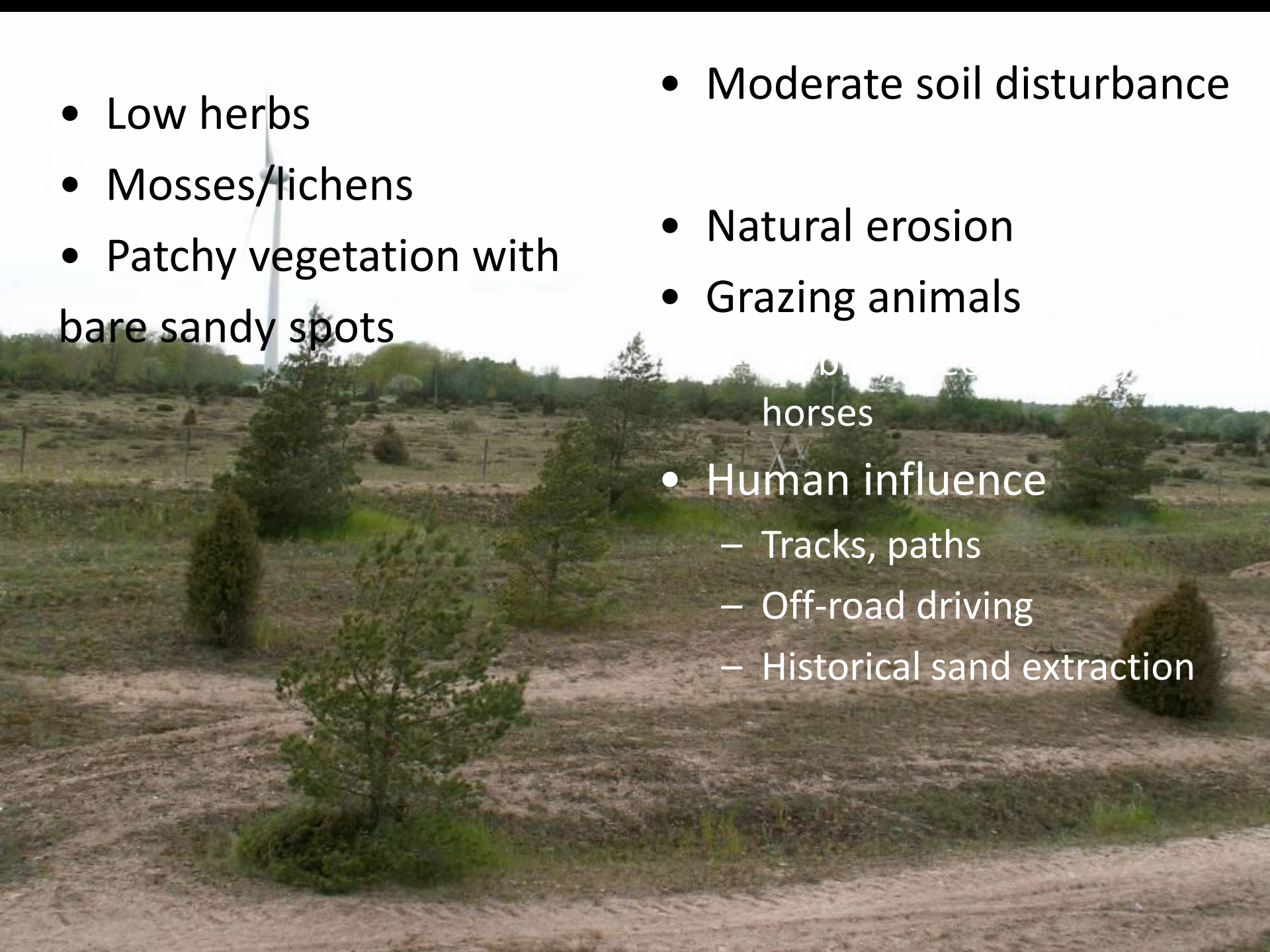
Habitats with different funga

± calcareous sand

- Sand steppe (strict)
- Sand steppe-like
  - ruderal habitats
  - military training fields
  - airfields
- Coastal sand dunes and sandy fields

leached/acid sand

- ”degenerated” sand steppe
- sandy heathland
  - Inland sand dunes
  - military training fields
  - Airfields
- Coastal sandy fields



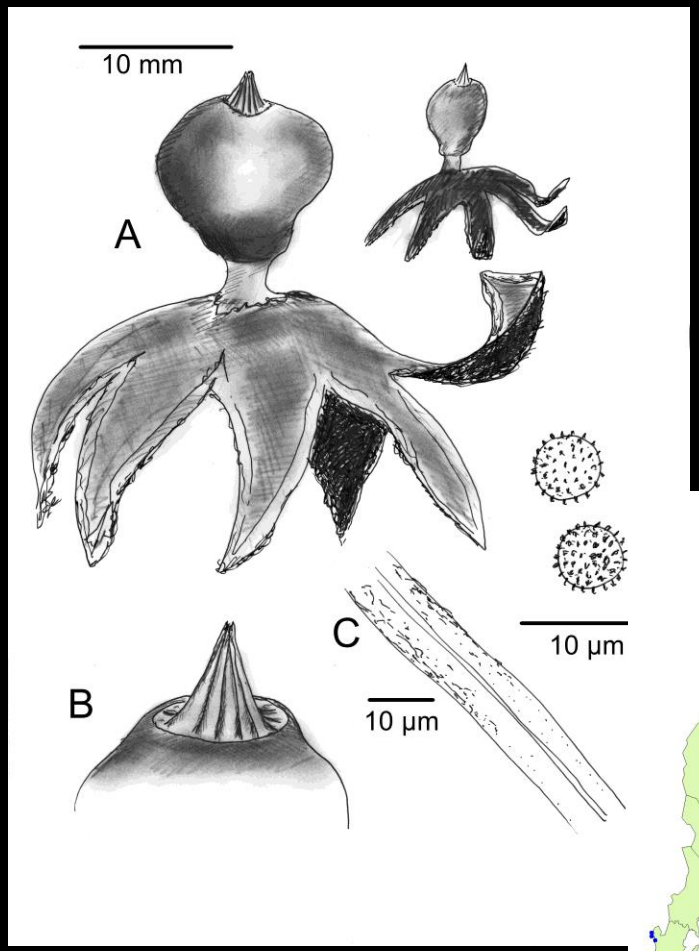
- Low herbs
- Mosses/lichens
- Patchy vegetation with bare sandy spots

- Moderate soil disturbance
- Natural erosion
- Grazing animals
  - [illegible] horses
- Human influence
  - Tracks, paths
  - Off-road driving
  - Historical sand extraction

Some characteristic fungi on ± calcareous sandy soil

Geastrum schmidelii NT (dvärgjordstjärna)

Photo Jörgen Jeppson



Geastrum pseudostriatum EN

(kornig jordstjärna)

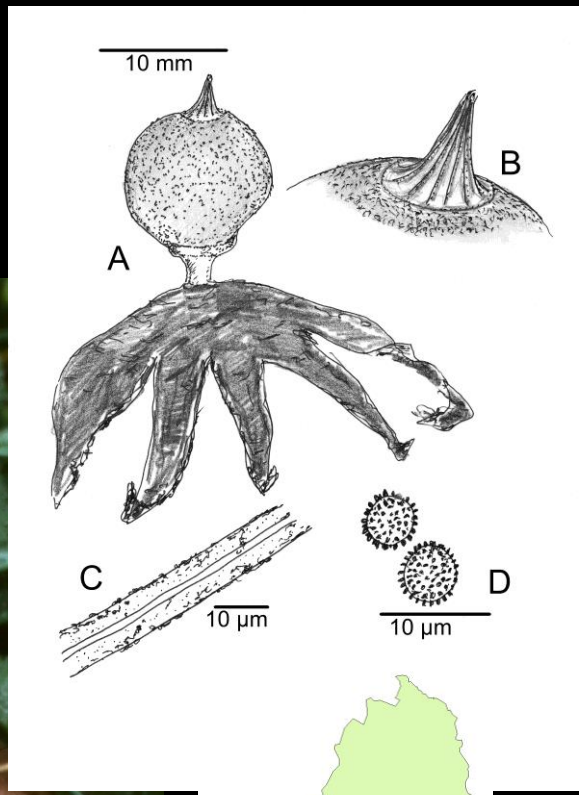
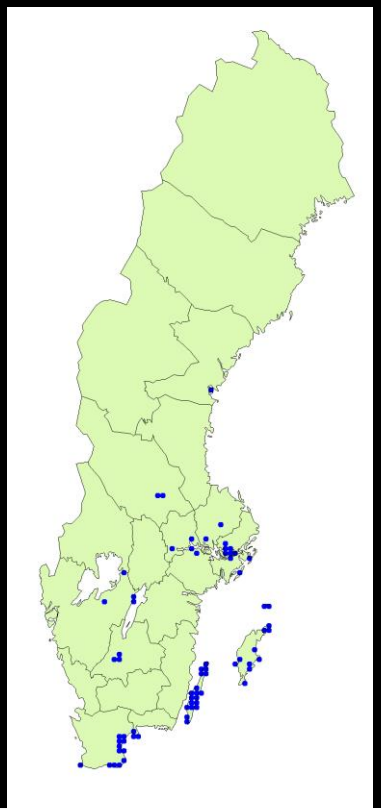
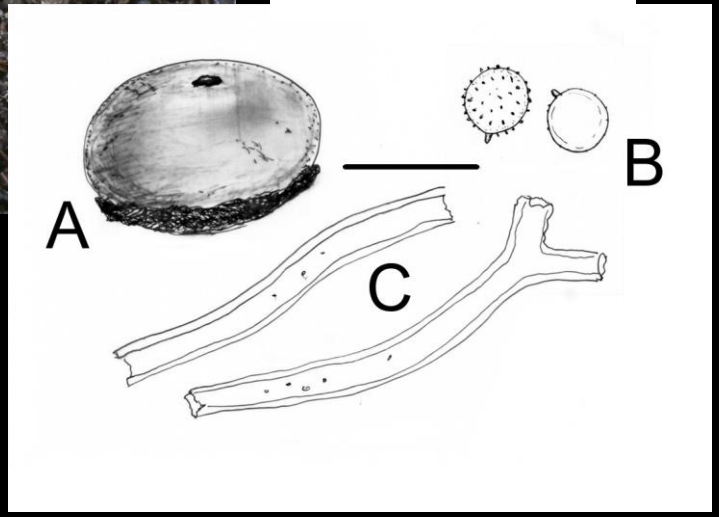


Photo Jörgen Jeppson

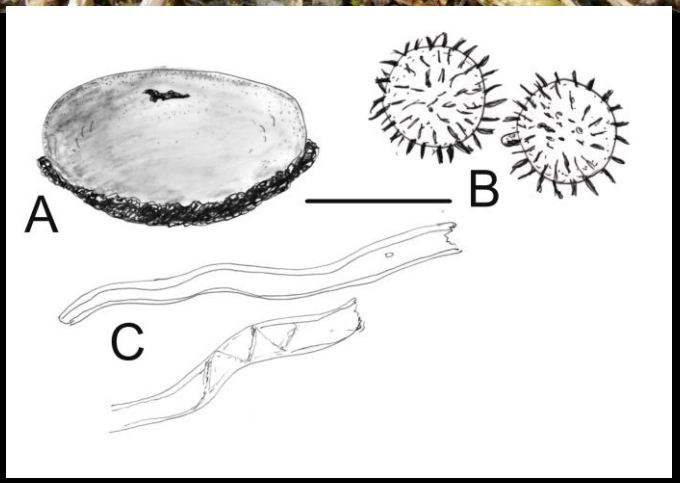
Disciseda candida VU (liten diskröksvamp)

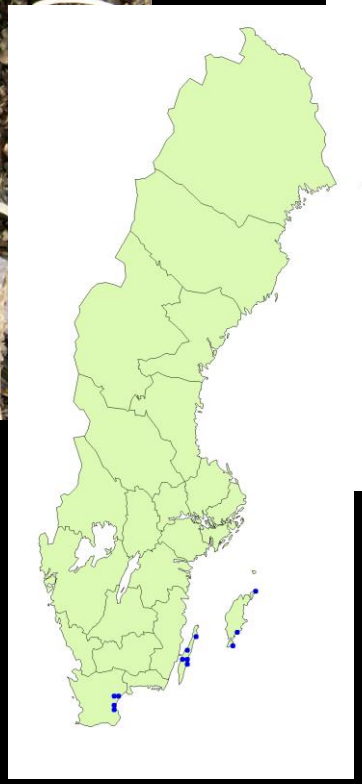
Photo Jörgen Jeppson

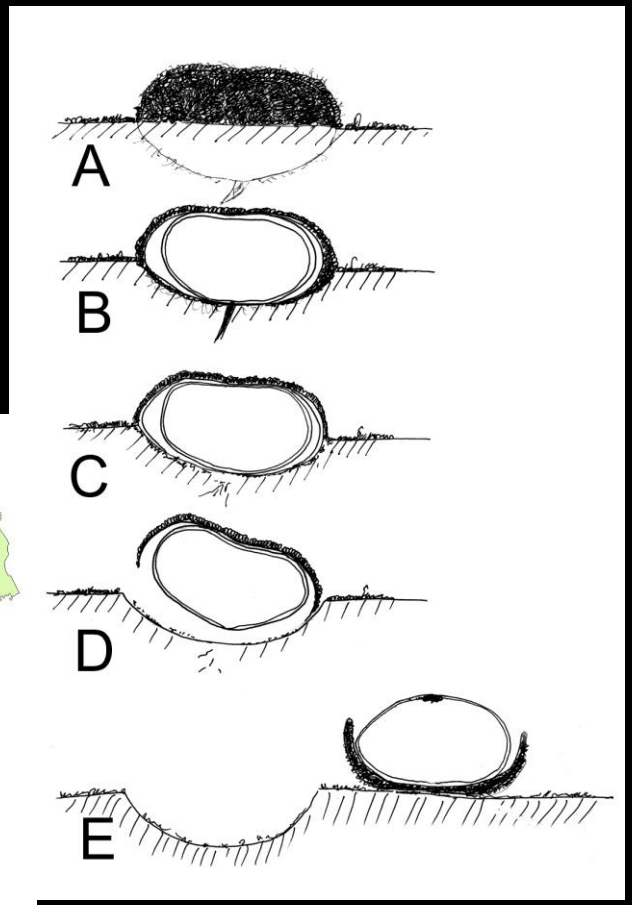




Disciseda bovista EN (stor diskröksvamp)

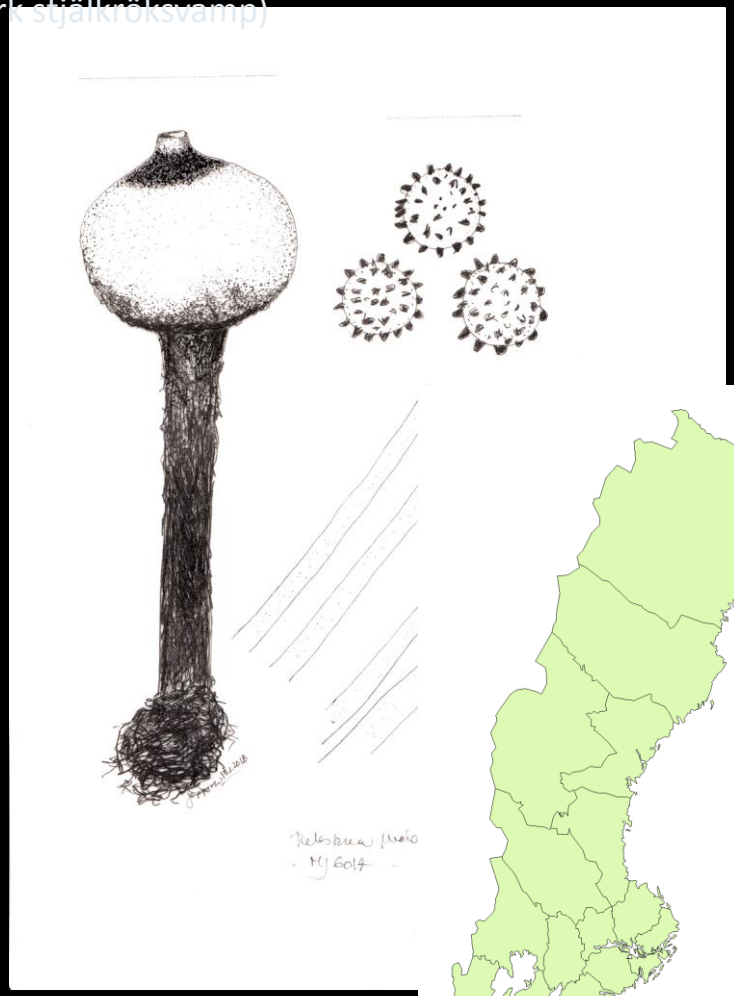


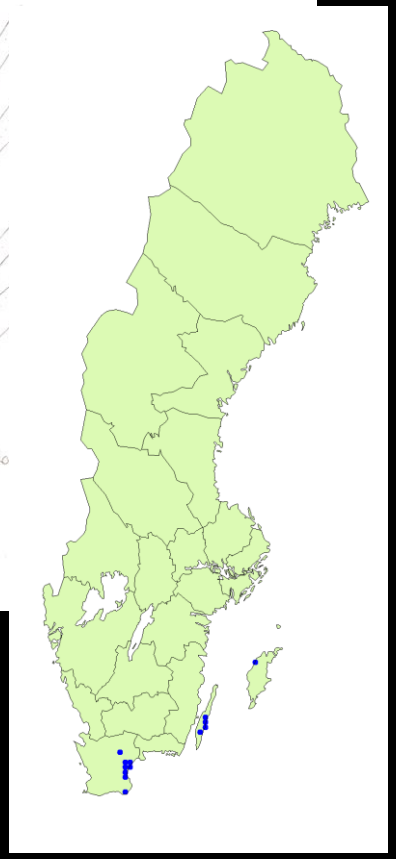




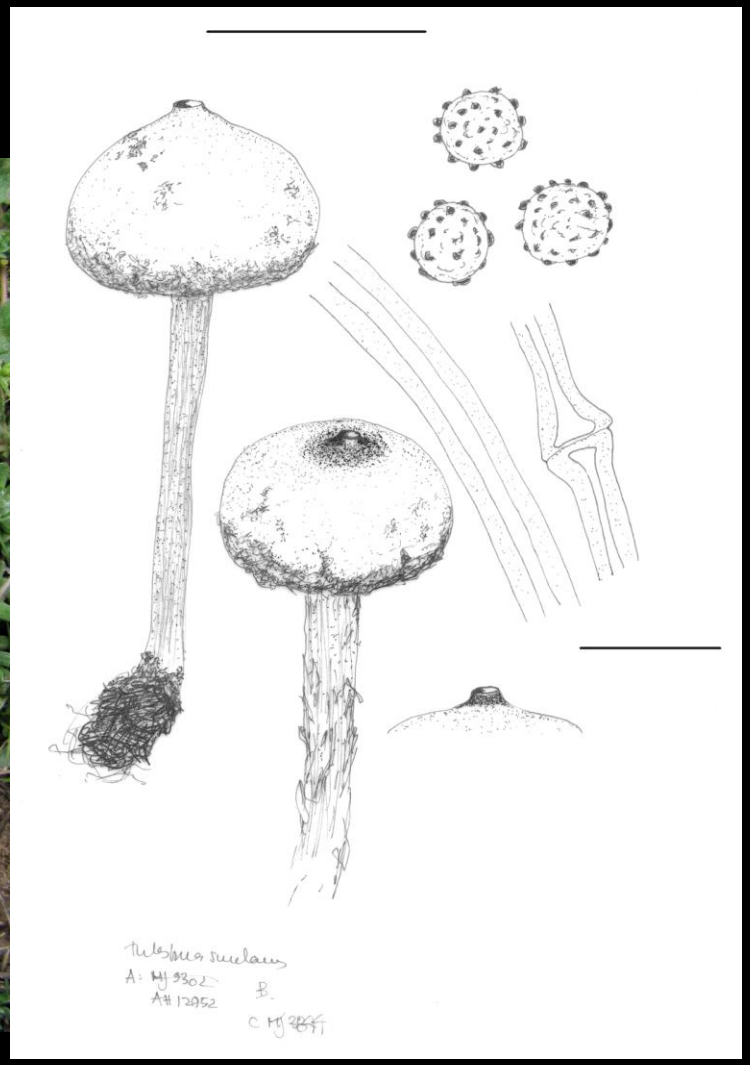
Tulostoma brumale NT (stjälkröksvamp)

Tulostoma melanocyclum EN (mörk stjälkröksvamp)

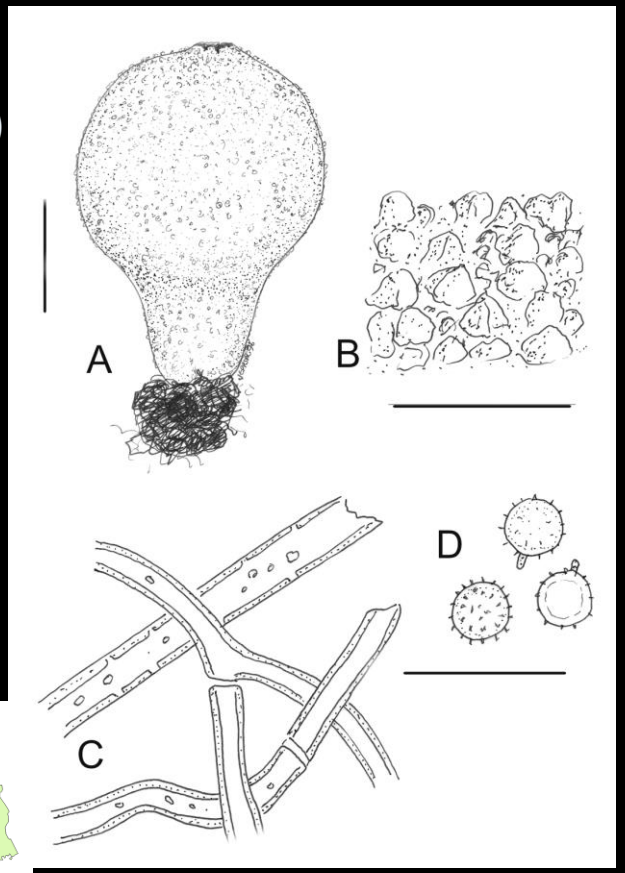


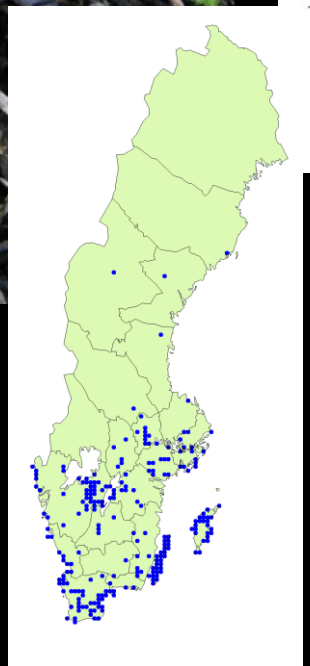


Tulostoma simulans

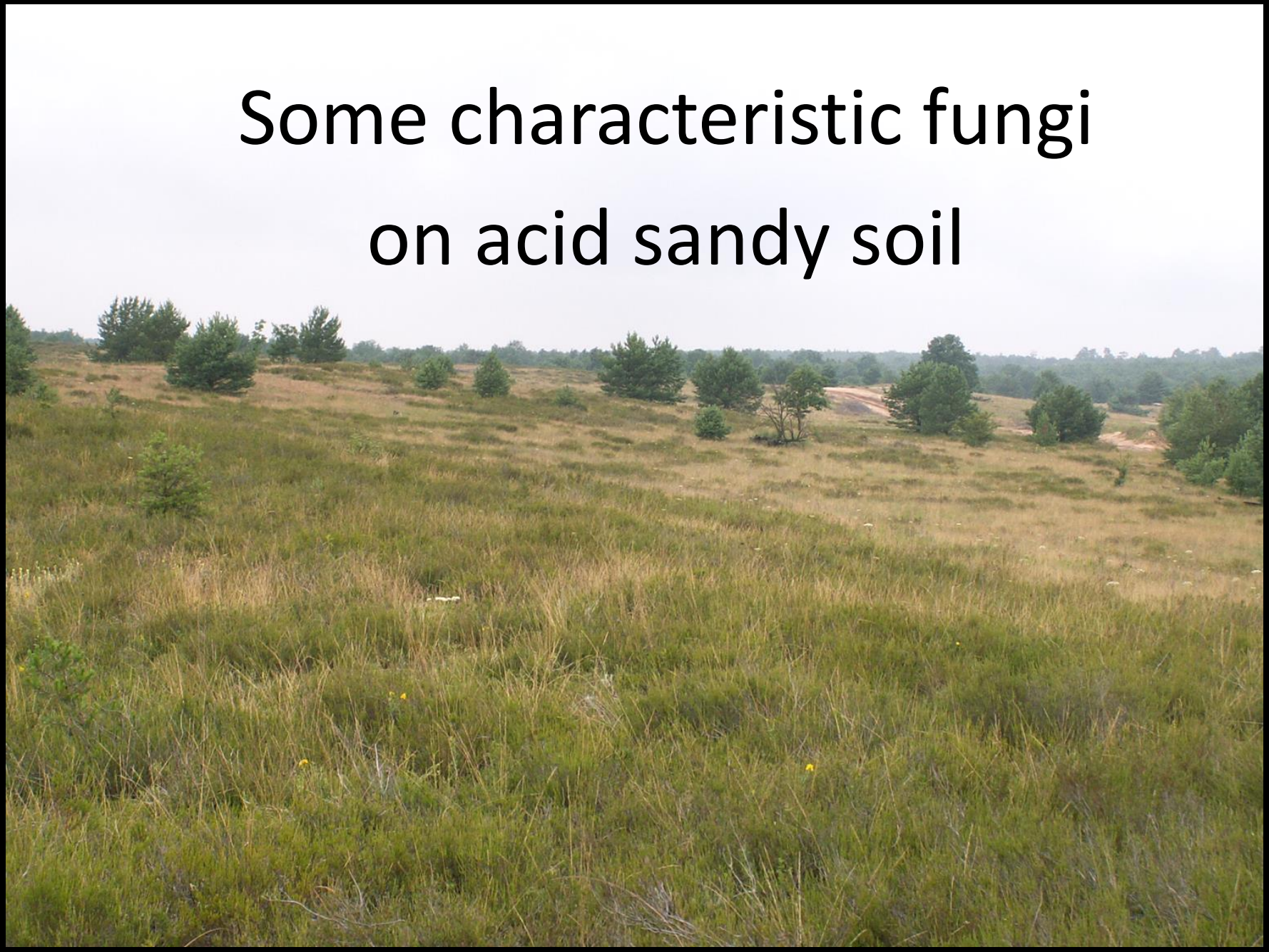


Lycoperdon lividum LC (kornig röksvamp)

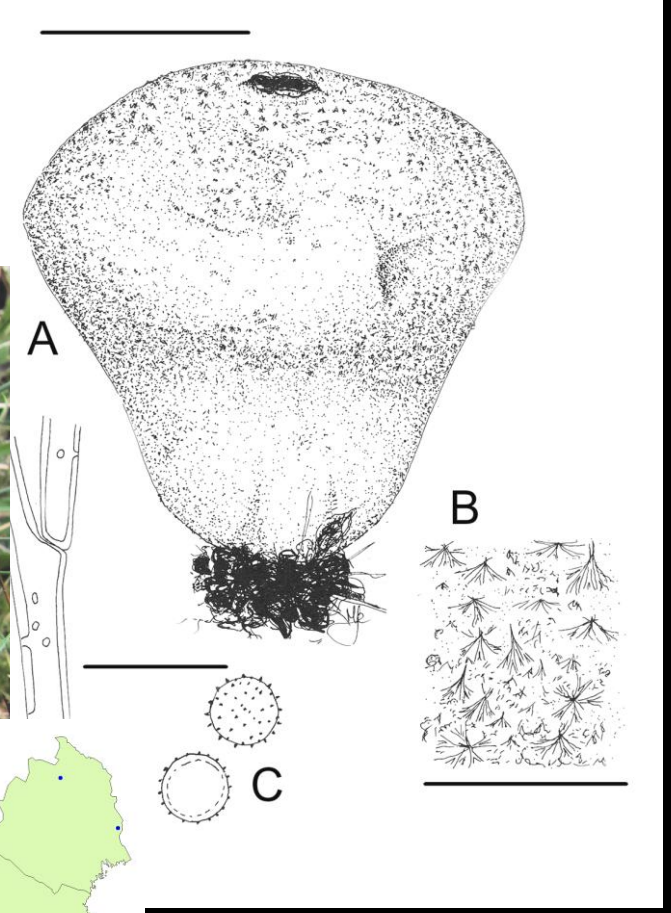


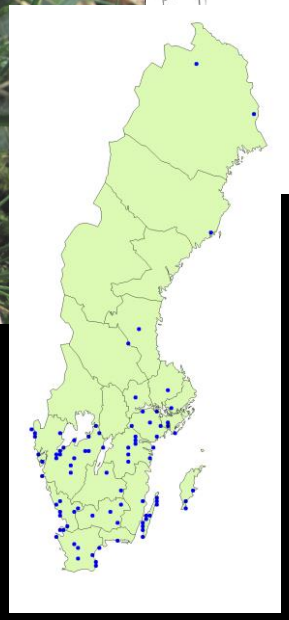


Some characteristic fungi on acid sandy soil



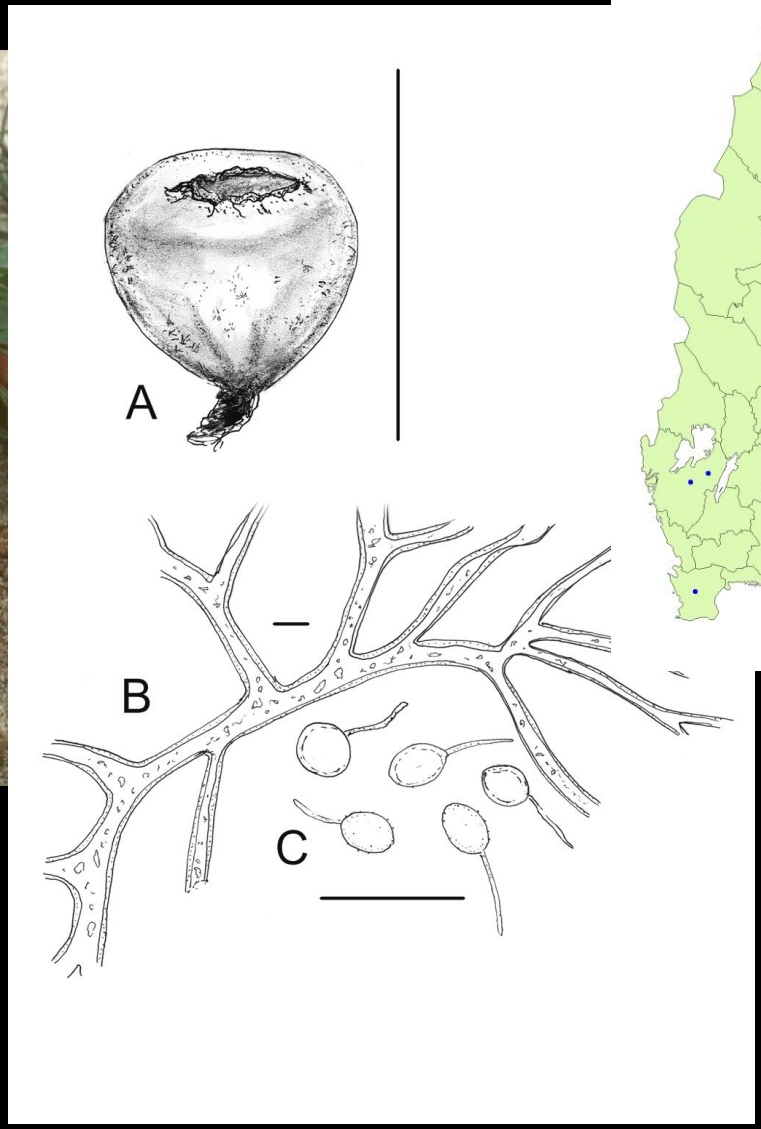
Lycoperdon ericaeum NT (hedröksvamp)





Lycoperdon radicatum EN (rotröksvamp)

Photo Jörgen Jeppson



Lycoperdon marginatum

Photo Tommy Knutsson

Threats to sandy habitats and its fungi

- Habitat deterioration (overgrowth, eutrophication, leaching, acidification, changing agricultural methods)
- Decreasing area (historical forestation, exploitation)
- Fragmentation

Conservation

Restoration

- Response from fungi is slow - but how slow?
- Waking up of dormant mycelia
- Establishments of new individuals from spores (fragmentation is a problem)
- Habitat continuity
- Fairy rings indicate old mycelia

Fungi as indicator species for valuable sandy habitats?

- Dependence on weather conditions for fructification

+ Fruitbodies of gastroid fungi are resistant to weathering and can be observed and identified almost all year round

Disciseda spp

Geastrum pseudostriatum

Tulostoma melanocyclum

} Indicator species for sand steppe habitats

Future

- Management
- Grazing
- Moderate soil disturbance

- Follow-up inventories
- Monitoring of selected species
- Inventories to increase knowledge of fungi on acid sandy soil

Thanks for your attention!

Acknowledgements

Thanks to Jörgens Jeppson and Tommy Knutsson for letting me use some of their photos of rare fungi