

Mydas flies from the deserts of south-western Africa



Namadytes vansoni



Cephalocera sp. © S. Marshall



Namibimydas psamminos

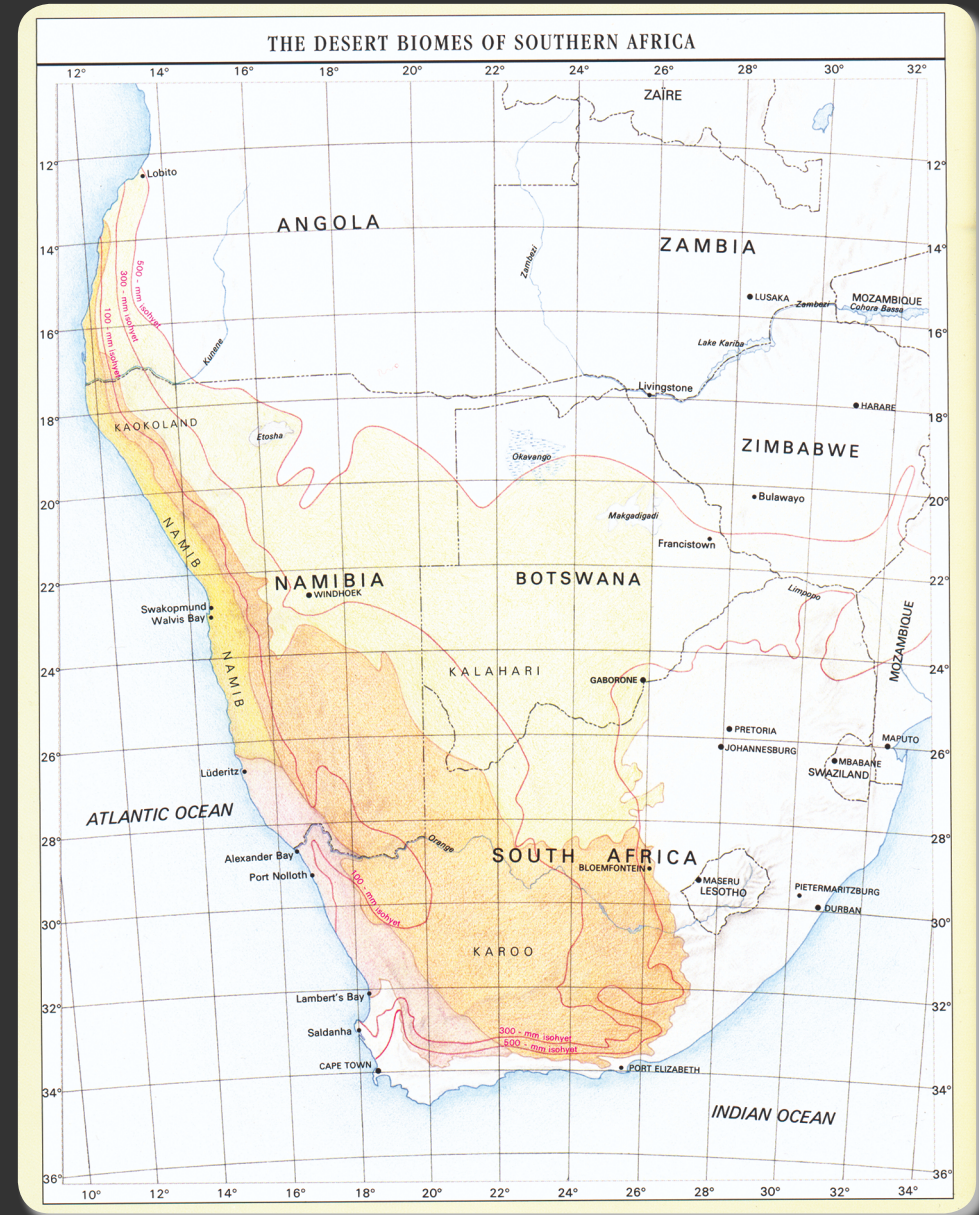
Torsten Dikow
@TDikow



Smithsonian
National Museum of Natural History

Namib, Kalahari, and Karoo

- ◇ Namib
 - › true desert
 - › arid conditions for past 55 – 80 my
 - › annual rainfall 5 – 85 mm (0.2 – 3.3 inch)
- ◇ Karoo
 - › Succulent and Nama Karoo
 - › annual rainfall 20 – 520 mm (0.8 – 20.5 inch)
- ◇ Kalahari
 - › savanna
 - › annual rainfall 235 – 500 mm (9.3 – 19.7 inch)



Mydidae – mydas flies

- ◇ adult flies flower-feeders
 - › some adults do not feed at all
- ◇ size = 8 – 60 mm (0.35 – 2.36 inch)
- ◇ 473 species in 66 genera
- ◇ southern Africa with highest species number



Rhapsomydas auratus © G. Ballmer



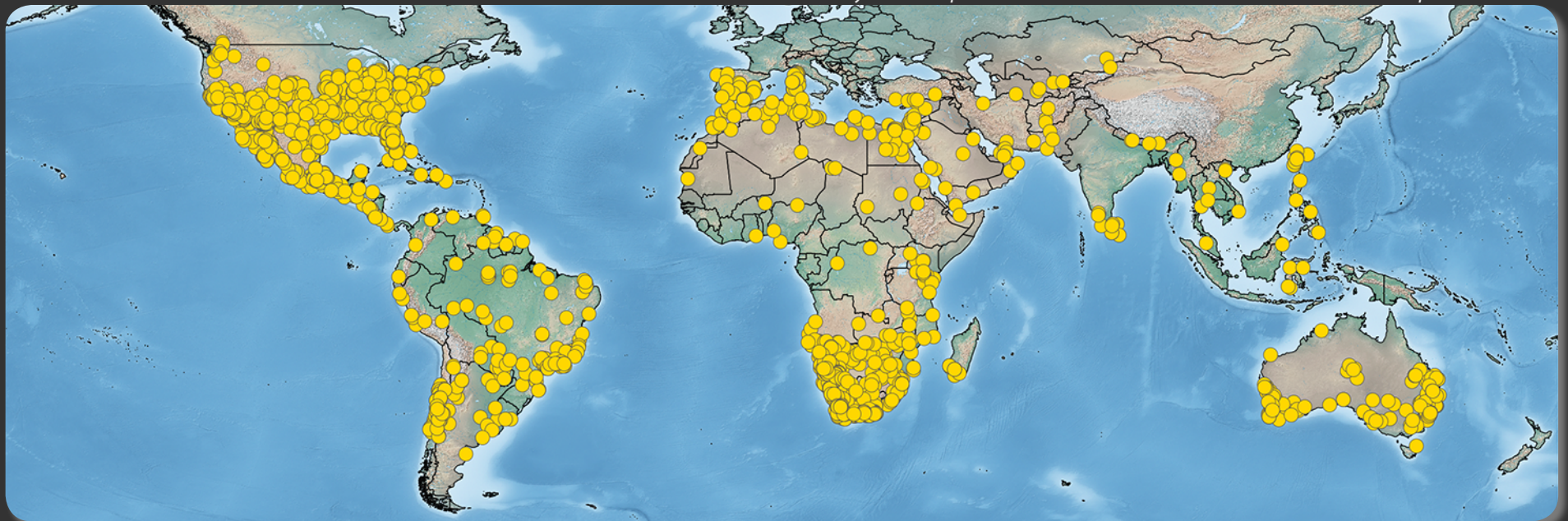
Anomalomydas mackerrasi © J. Hort



Mydas xanthopterus © S. Marshall



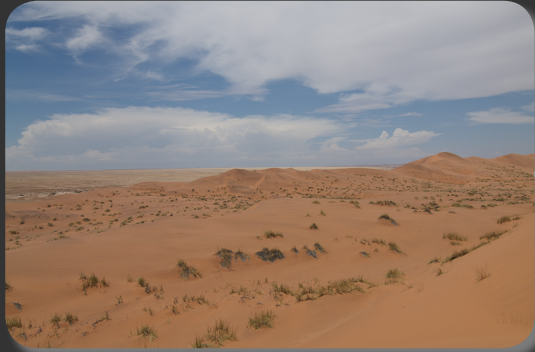
Diochlistus auripennis © P. Chew



... mydas flies and deserts in south-western Africa



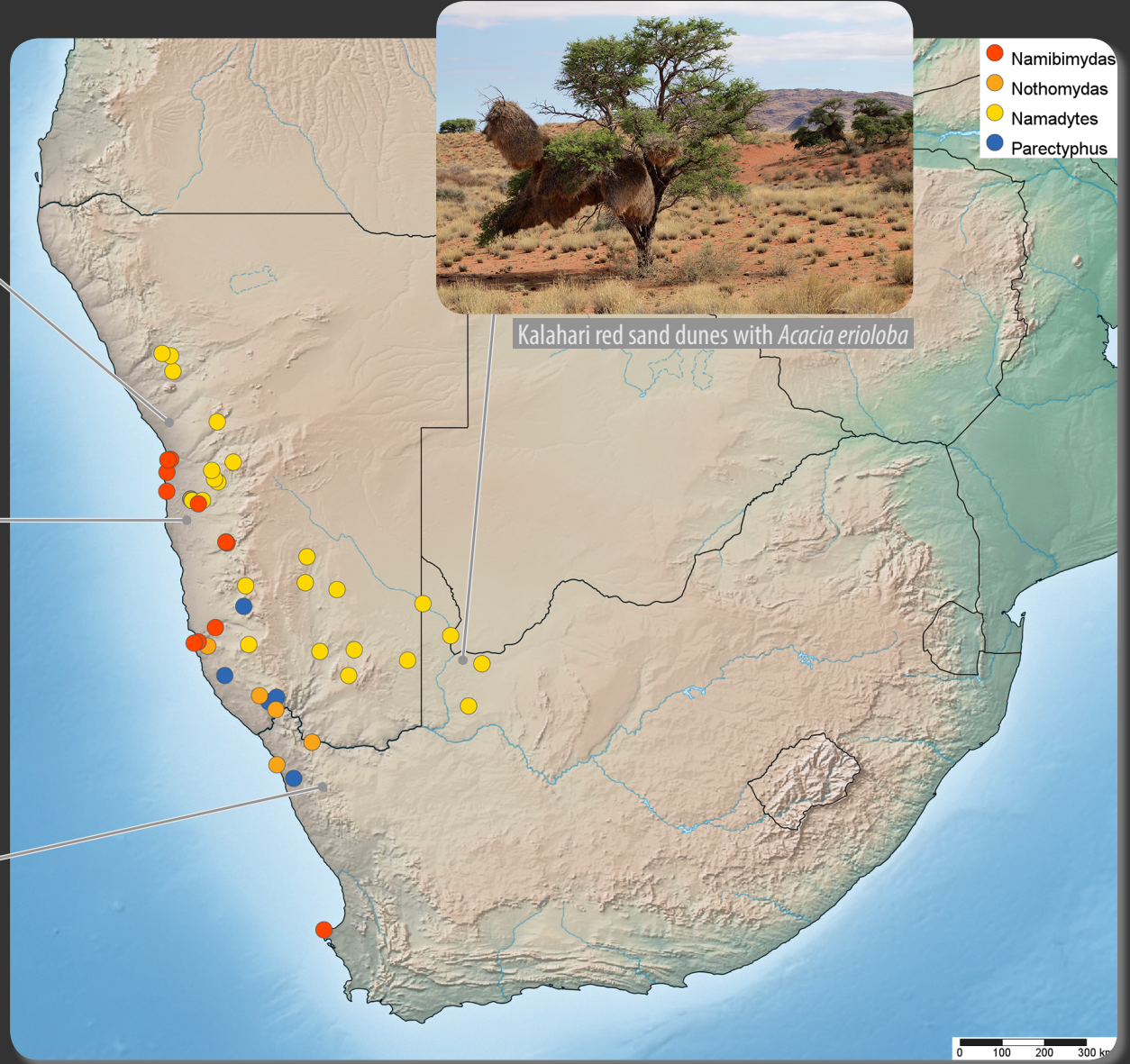
Namib gravel plains with *Welwitschia mirabilis*



Namib sand dunes (gravel plains in distance)



Succulent Karoo with *Aloe dichotoma*



Kalahari red sand dunes with *Acacia erioloba*

- Namibimydas
- Nothomydas
- Namadytes
- Parectyphus

0 100 200 300 km

◇ *Namibimydas*

- › 4 species, reviewed Dikow 2012
- › 23 specimens, 7 collections (NMNH)



◇ *Namadytes*

- › 3 species, reviewed Dikow & Leon 2014
- › 68 specimens, 10 collections (NMNH)



◇ *Nothomydas*

- › 4 species, reviewed Dikow 2012
- › 5 specimens, 3 collections



◇ *Parectyphus*

- › 1 species, reviewed Lyons & Dikow 2010
- › 9 specimens, 5 collections



..... enigmatic mydas-fly species

◇ *Syllegomydas* new species

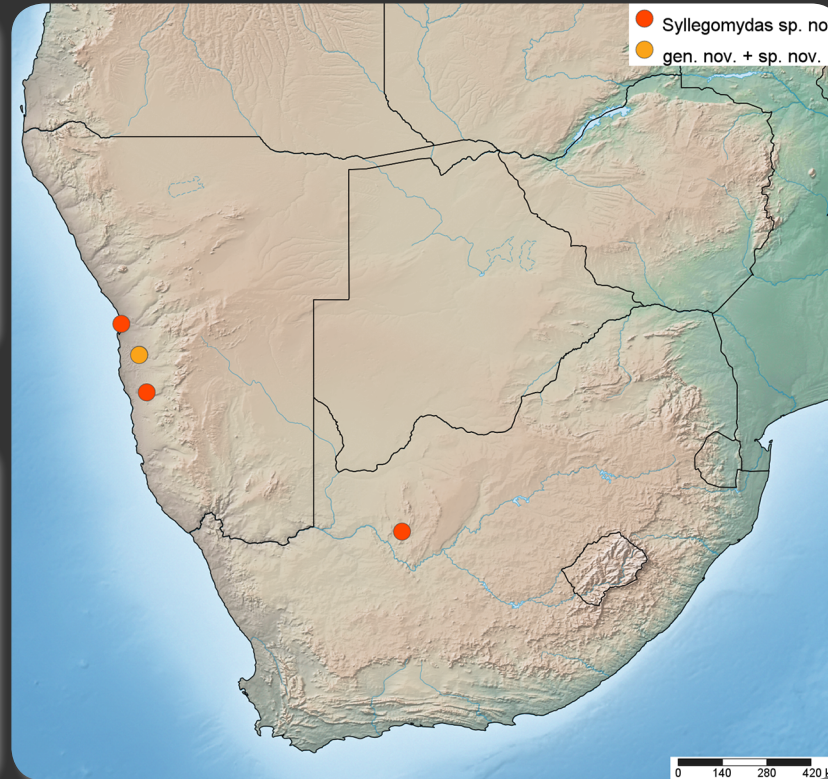
- › 3 female specimens, 2 collections

◇ new genus and new species

- › 9 specimens, 2 collections (NMNH)

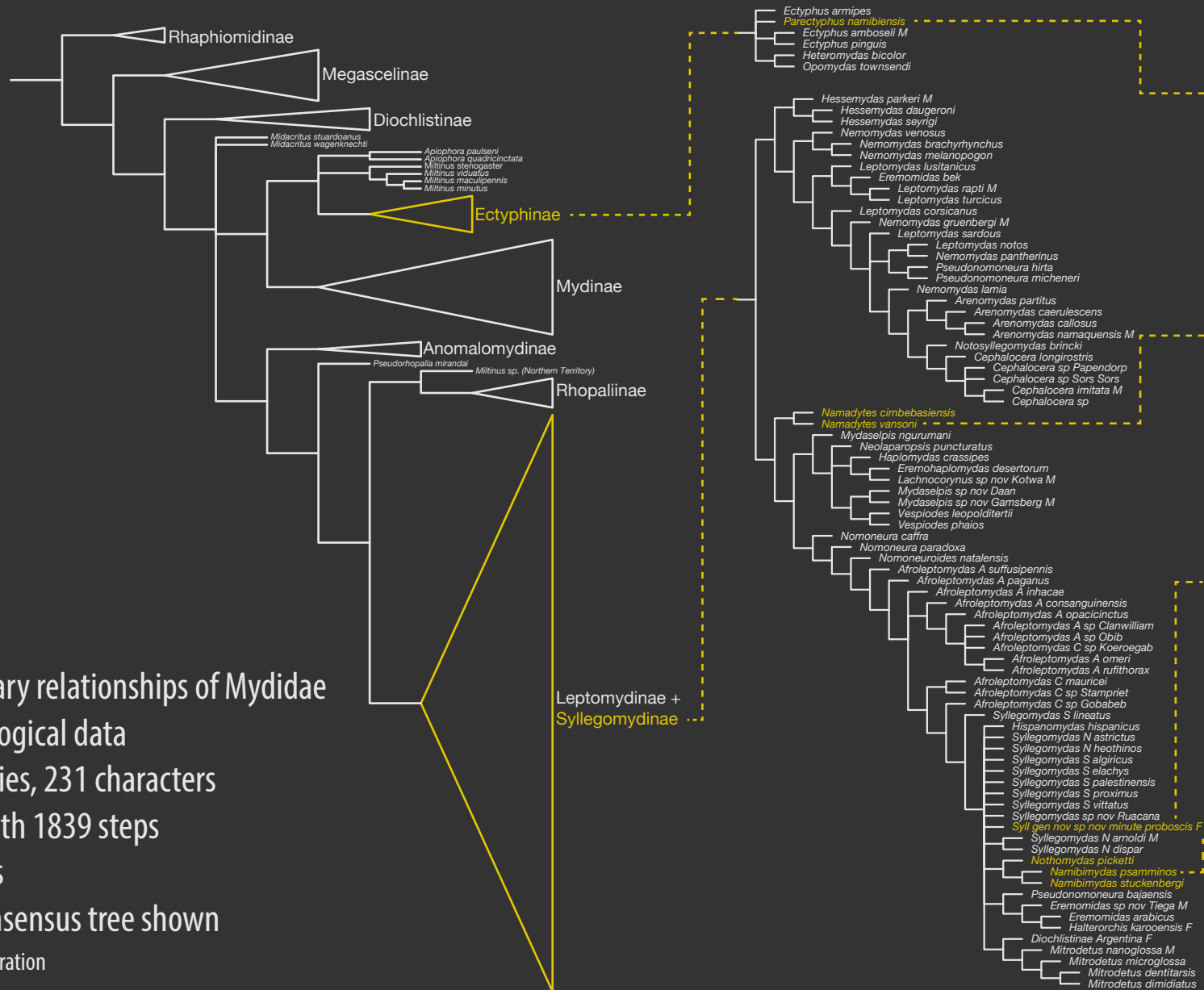


head in ventral view



head in ventral view

..... phylogenetic diversity in deserts of south-western Africa



Parectyphus namibiensis



Namadytes vansoni



Syilegomydas new species



Namibimidas psamminos

Evolutionary relationships of Mydidae

- › morphological data
- › 131 species, 231 characters
- › tree length 1839 steps
- › 346 trees
- › strict consensus tree shown

Dikow in preparation

..... sharing specimen records with global community

◇ Global Biodiversity Information Facility



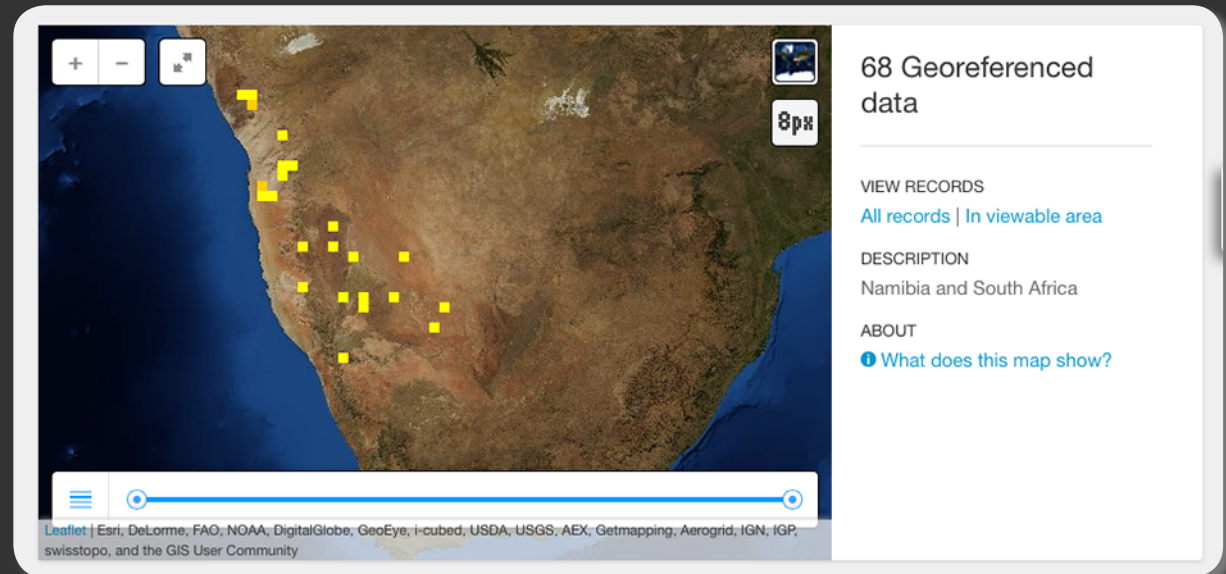
GBIF INTEGRATED PUBLISHING TOOLKIT (IPT)

free and open access to biodiversity data

◇ NMNH IPT instance (collections.mnh.si.edu/ipt/)

› specimen occurrence data for *Namadytes*

› www.gbif.org/dataset/5e6acf4c-e913-45fd-8466-5c0b92c322dd





Namadytes vansoni



Cephalocera sp. © S. Marshall



Namibimydas psamminos

> to learn more visit asiloidflies.si.edu <

> presentation on slideshare.net slidesha.re/1ou2aXm <