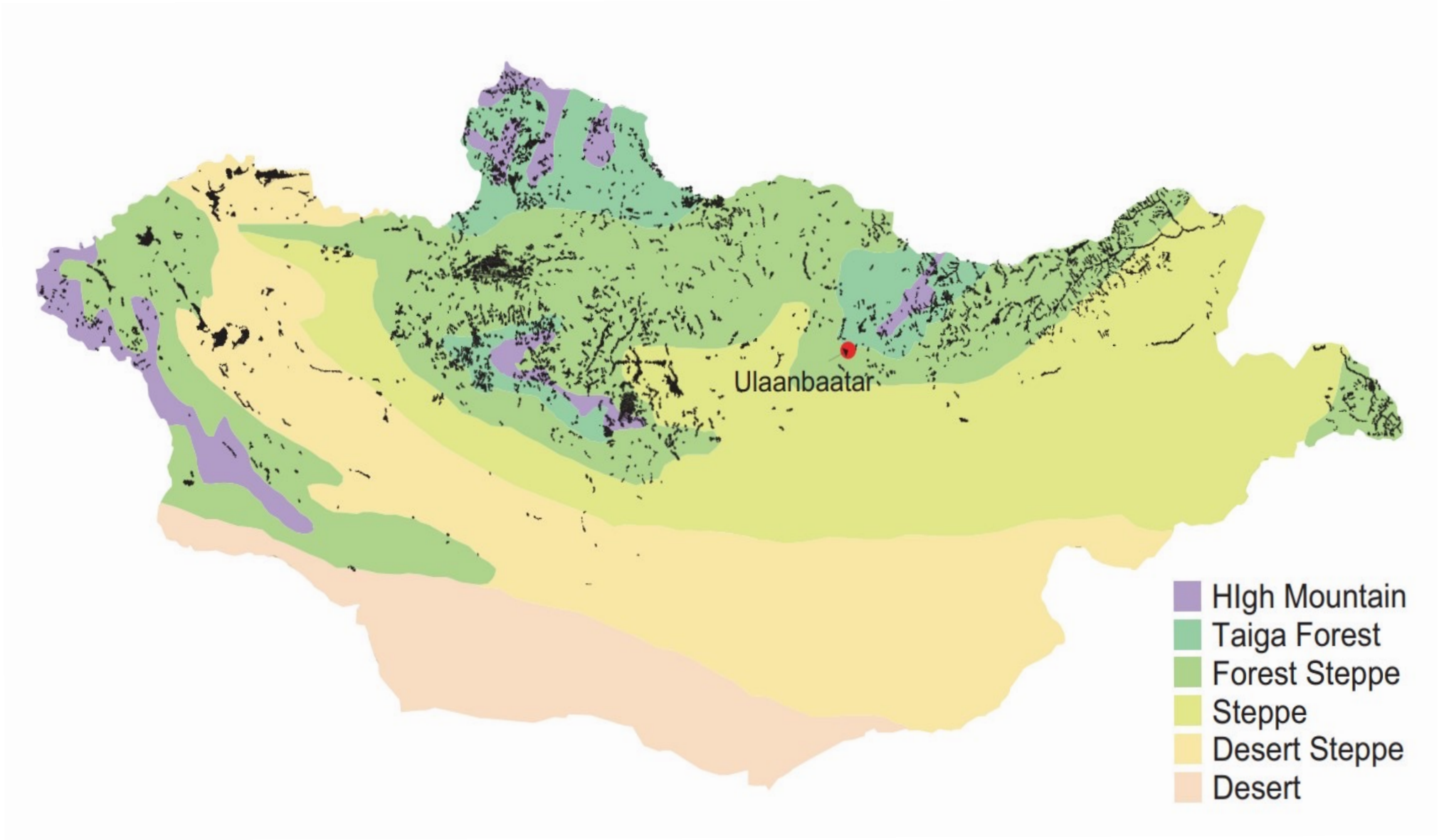
Review of the genus *Cheilosia* Meigen, 1822 (Diptera: Syrphidae) from Mongolia

Sander Bot & Ximo Mengual




ARCTIC OCEAN
KARA SEA
LAPTEV SEA
Dickson
Tiksi
Gulf of Yana
Nizhneyansk
Ob'
Lower
Yenis
Lena
RUSSIA
Surgut
Yakutsk
Aldan
Perm
Yekaterinburg
Tobol
Irtysh
Ob'
Angar
Lena
Ufa
Tomsk
Novosibirsk
Krasnoyarsk
Bratsk
Lake Baikal
SEA OF
Barnaul
Irkutsk
Chita
Amur (Heilong)
Argun
Amur
Astana
Qaraghandy
Yenisey
Erdenet
Seleng
Ulaanbaatar
KAZAKHSTAN
Aral Sea
Lake Balkhash
Irtysh
MONGOLIA
Qiqihar
Harbin
Changchun
Bishkek
Almaty
Urumqi
Hami
Vladivostok
Sapporo
Syr
Issyk Kul
Tashkent
KYRGYZSTAN
Shenyeng
SEA OF JAPAN
UZBEKISTAN
Baotou
Beijing
N. KOREA
KMENISTAN
Samarqand
Kashi
Jiayuguan
Yinchuan
Tianjin
Pyongyang
EAST SEA
gabat
Dushanbe
TAJIKISTAN
Amur
Hotan
Xining
Taiyuan
Zibo
Seoul
Huang
Jinan
S. KOREA
JAPAN
Tokyo
Mashhad
Kabul
Indus
Lanzhou
Zhengzhou
Huang
Hiroshima
YELLOW SEA
Osaka
Peshawar
Xian
Huainan
AFGHANISTAN
Islamabad
Nanjing
Nagasaki
Kandahar
Lahore
CHINA
Shanghai
Salwe
Chengdu
Wuhan
Yangt
Multan
Hangzhou
AN
New Delhi
Lhasa
Chongqing
Nanchang
Kathmandu
Changsha
EAST CHINA SEA
Indus
NEPAL
Jaipur
Thimphu
PAKISTAN
Guiyang
Kanpur
Patna
BHUTAN
Kunming
Guilin
Fuzhou
Taipei
Dubai
Hyderabad
INDIA
Varanasi
Gang
Dhaka
Guangzhou
Shantou
TAIWAN
Muscat
Karachi
Bhopal
Kolkata
Nanning
Shenzhen
Kaohsiung
Ahmedabad
Chittagong
Macao
Hong Kong
Ra's al Had
Surat
Nagpur
MYANMAR
Hanoi
Mekong
Bhilai
BANGLADESH
Naypyidaw
Irrawad
Mumbai
Pune
Godāv
Bhubaneshwar
LAOS
Hyderabad
Vishakhapatnam
Vientiane
PHILIPPINE SEA
ARABIAN SEA
Bay of Bengal
Rangoon
THAILAND
VIETNAM
SOUTH CHINA
Manila
NORTHERN MARIANA IS. (U.S.)


Ulaanbaatar
HIgh Mountain
Taiga Forest
Forest Steppe
Steppe
Desert Steppe
Desert

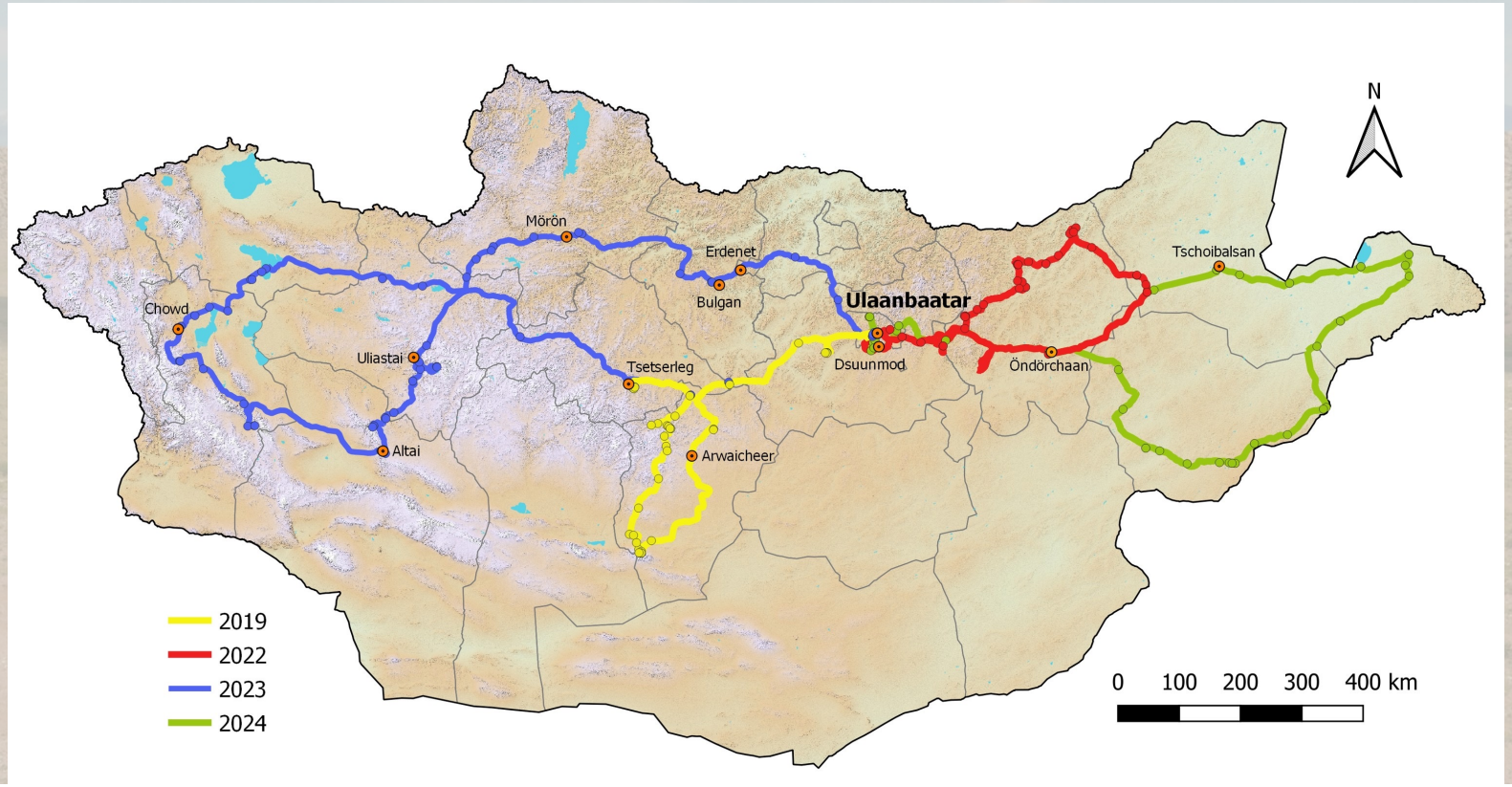
Previous work on *Cheilosia* in Mongolia

- Bańkowska (1968): 3 publications
- Barkalov, A.V. & Peck, L.V. 1989. A review of hoverflies of the genus *Cheilosia* (Diptera, Syrphidae) in the fauna of the Mongolian People's Republic.

- Total number of *Cheilosia* species from literature: 24

Entomological expeditions

- 2012 – 2017
  - Gisella Merkel-Wallner
- 2019 - now
  - BioMongol Foundation (André van Eck)

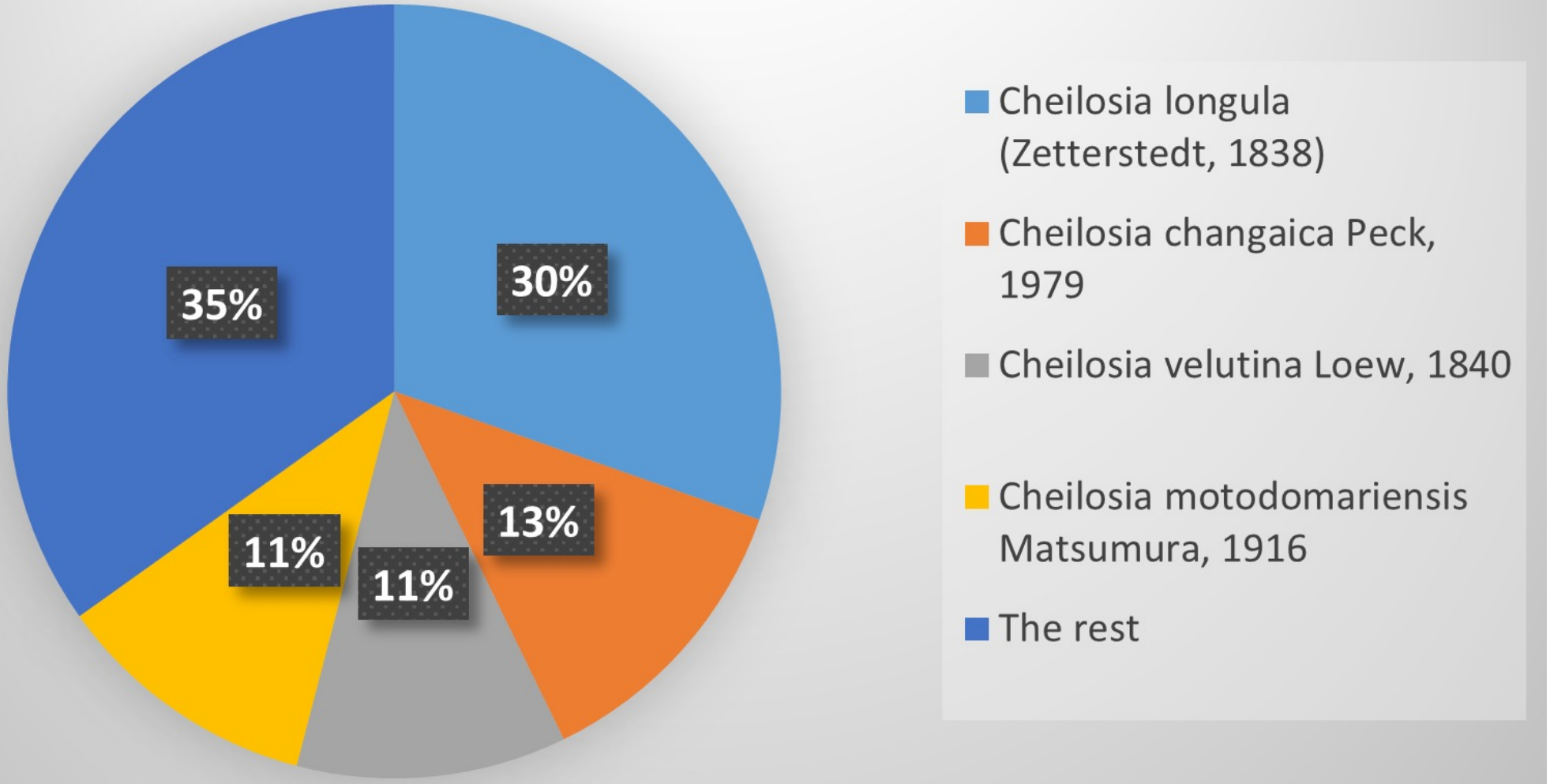


Results

- 12 collectors, 88% by four collectors:
  - Axel Ssymank
  - André van Eck
  - Gisella Merkel-Wallner
  - Gerard Pennards

- 12 expeditions: 2.854 *Cheilosia* specimens
- 30 *Cheilosia* species

Common Species



New *Cheilosia* species for Mongolia

- 9 New *Cheilosia* species for Mongolia
  - *Cheilosia (Cheilosia) albitarsis* (Meigen, 1822) (one specimen only!)
  - *Cheilosia (Cheilosia) angustigenis* Becker, 1894
  - *Cheilosia (Cheilosia) impressa* Loew, 1840 (141 specimens!)
  - *Cheilosia (Eucartosyrphus) longula aff.*
  - *Cheilosia (Cheilosia) uviformis* Becker, 1894
  - *Cheilosia (Cheilosia) gigantea* (Zetterstedt, 1838)
  - *Cheilosia (Cheilosia) proxima* (Zetterstedt, 1843)
  - *Cheilosia (Cheilosia) rufimana* Becker, 1894
  - *Cheilosia (Cheilosia) ushguliensis* Bot et al. 2025

Missed species

- *Cheilosia (Cheilosia) lasiopa* Kowarz, 1885
- *Cheilosia (Neocheilosia) luteicornis* (Zetterstedt, 1838)
- *Cheilosia (Neocheilosia) morio* (Zetterstedt, 1838)
- *Cheilosia (Eucartosyrphus) nuda* Shiraki, 1930
- *Cheilosia (Cheilosia) urbana* (Meigen, 1822)

Possible new species to science

- *Cheilosia (Taeniochilosia) nigripes*
- Sp. near *urbana* (female only)
- Sp. near *lenis*
- Sp. nov. *alba* group



Other research questions

- Better understand difference *C. albohirta* and *C. sapporense*
- *C. (Montanocheila) zmilampis* Violovitsh, 1975 is synonym of *C. Pictipennis* according Claussen (1998)
- *C. (Montanocheila) alpina* (Zetterstedt, 1838) from the Altai might be different. Females only, hopefully males this summer

