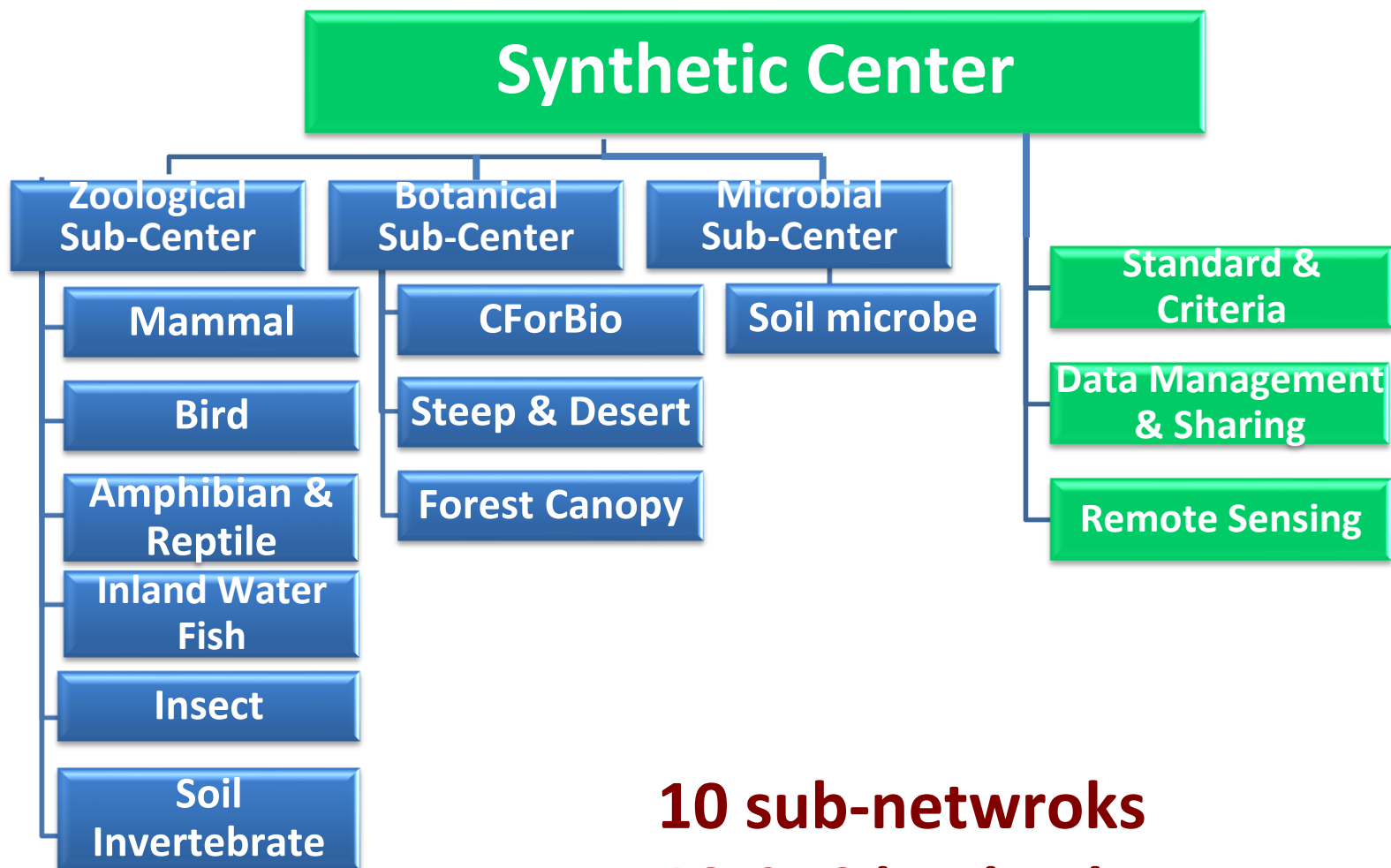
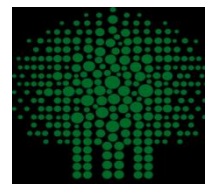
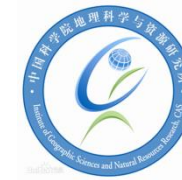


# 中国生物多样性监测与研究网络 Sino BON

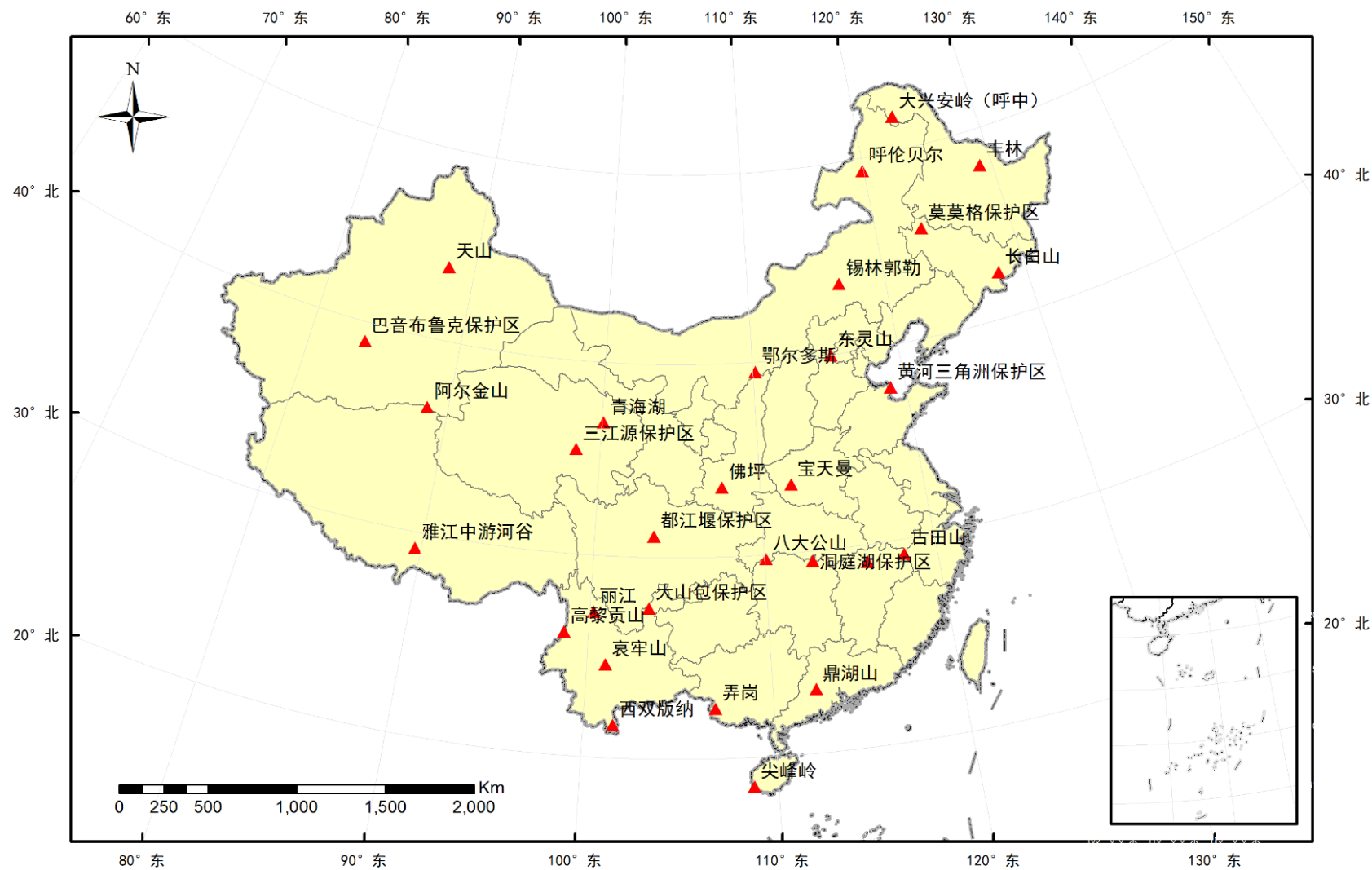
# Sino BON: Participants



**10 sub-networks**  
**19 CAS institutions**



# Sino BON: Monitoring sites



# Sino BON: Monitoring subjects



Forest canopy



Within forest

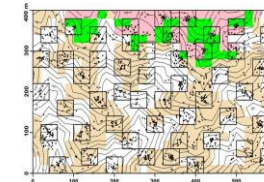
Seedlings



Phenology



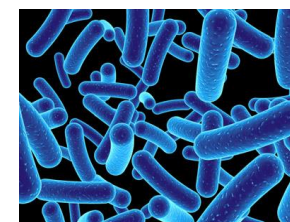
Tree growth



Ground



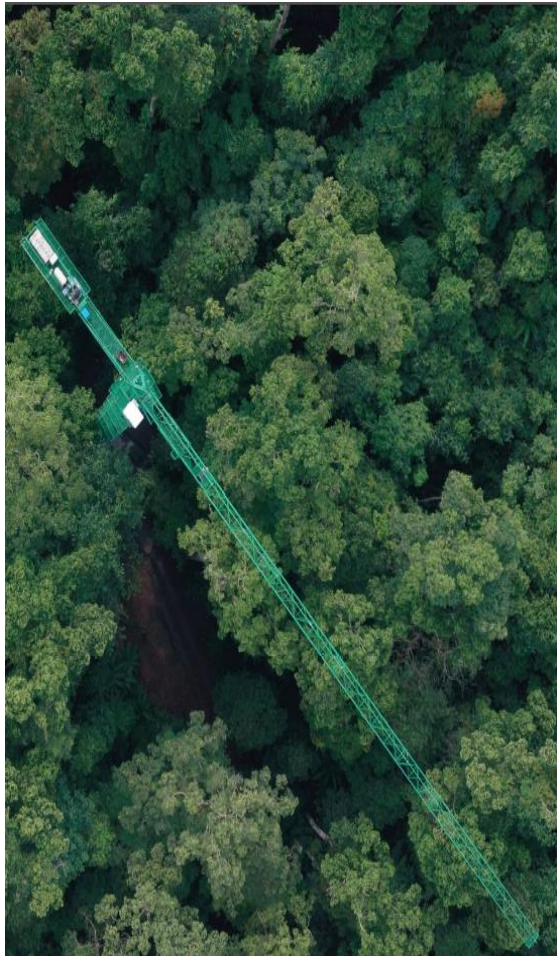
Underground



# Sino BON: Methods of monitoring



Tower crane  
(Forest canopy)



Satellite Tracking  
(Birds)



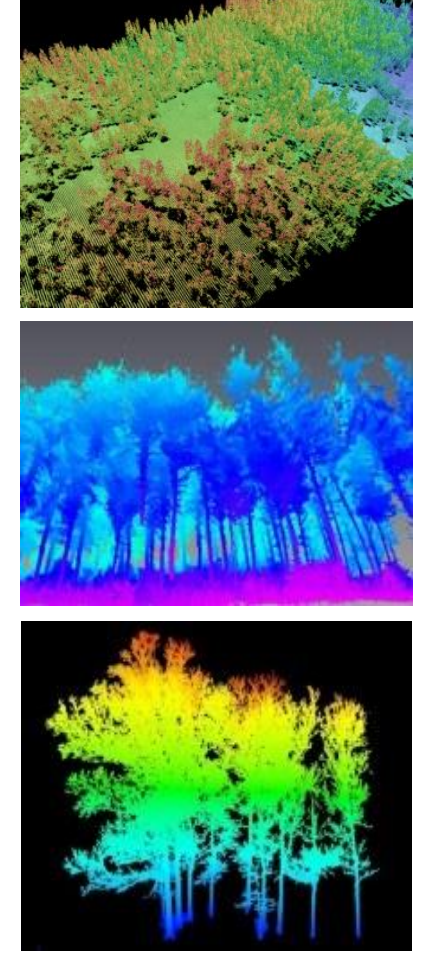
Infrared camera  
(Mammals & birds)



ID tracking  
(Amphibia)



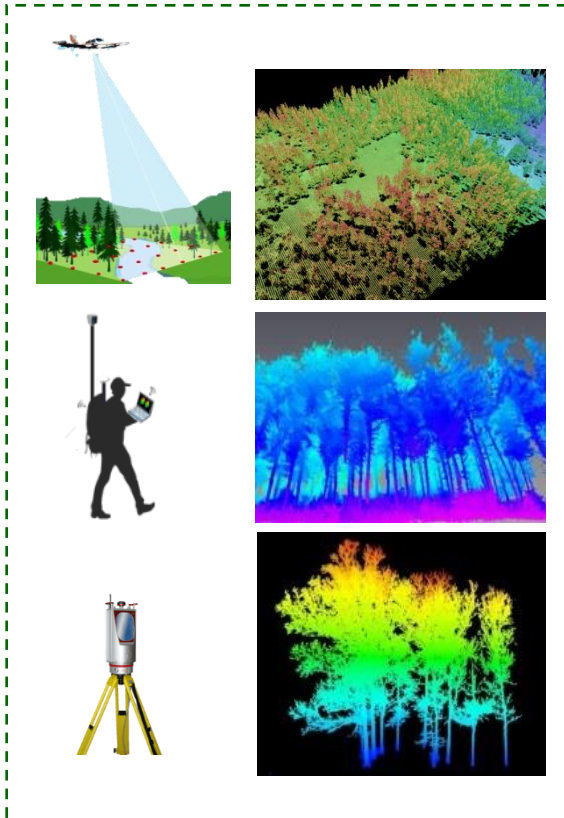
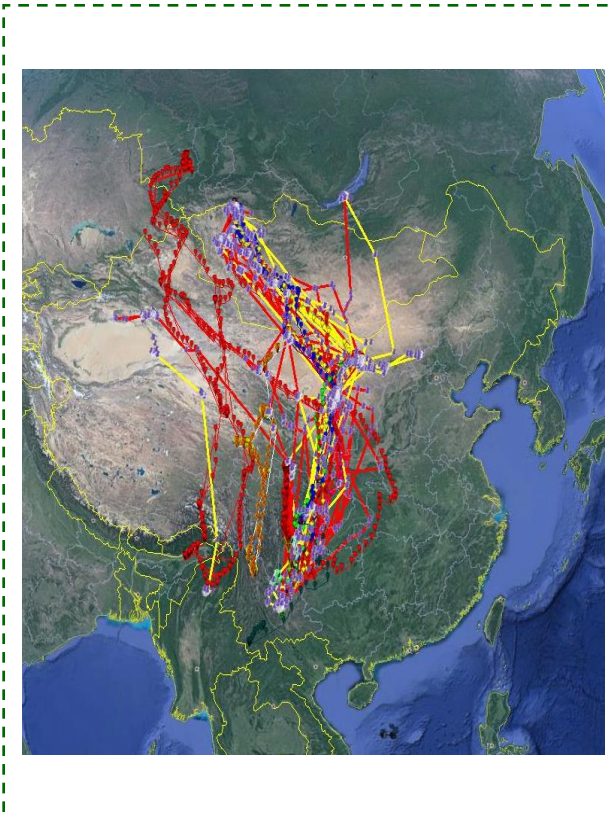
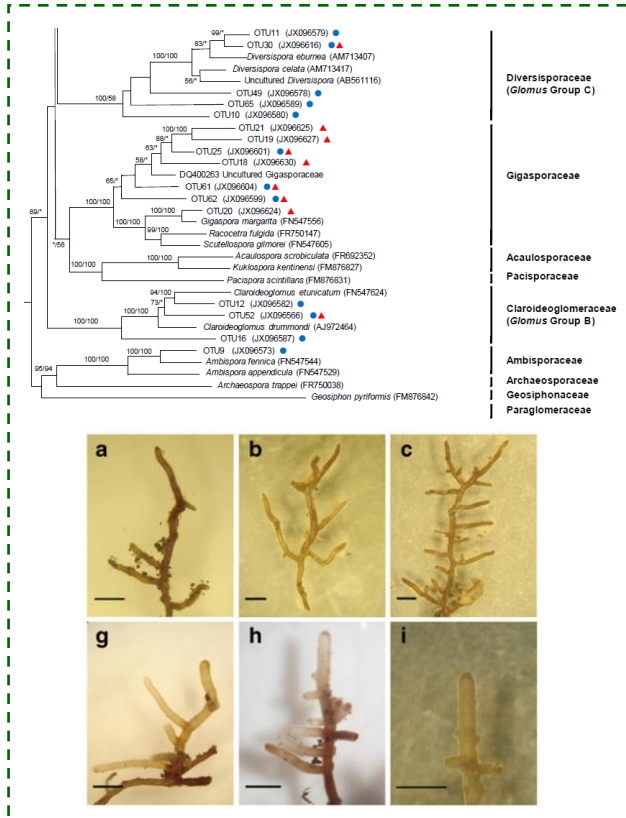
LiDAR  
(Vegetation)



# Sino BON: Data obtained



## Gene—Species—Population—Community—Ecosystem—Landscape



Microbial gene (DNA analysis)

Plant distribution (Field observation)

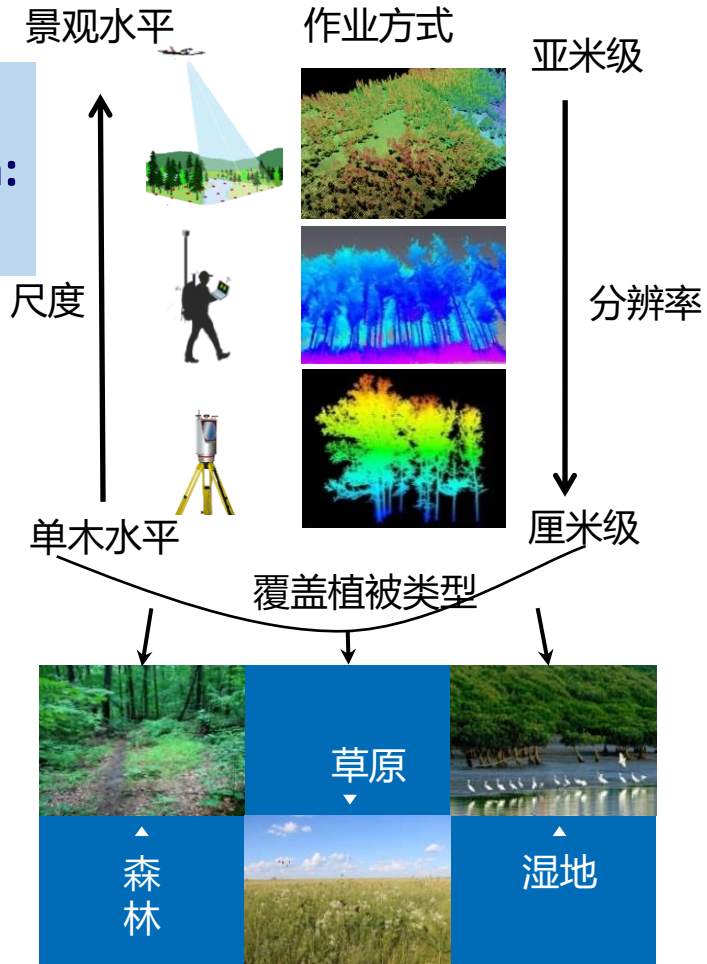
Animal distribution/migration (Camera/Satellite tracking)

Landscape data (LiDAR)

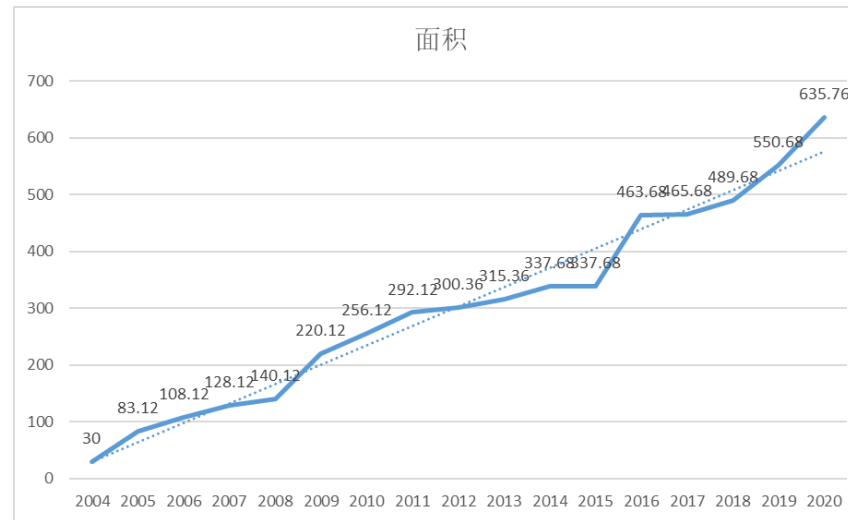
# Highlights: Large permanent forest monitoring plot



Community composition:  
LiDAR



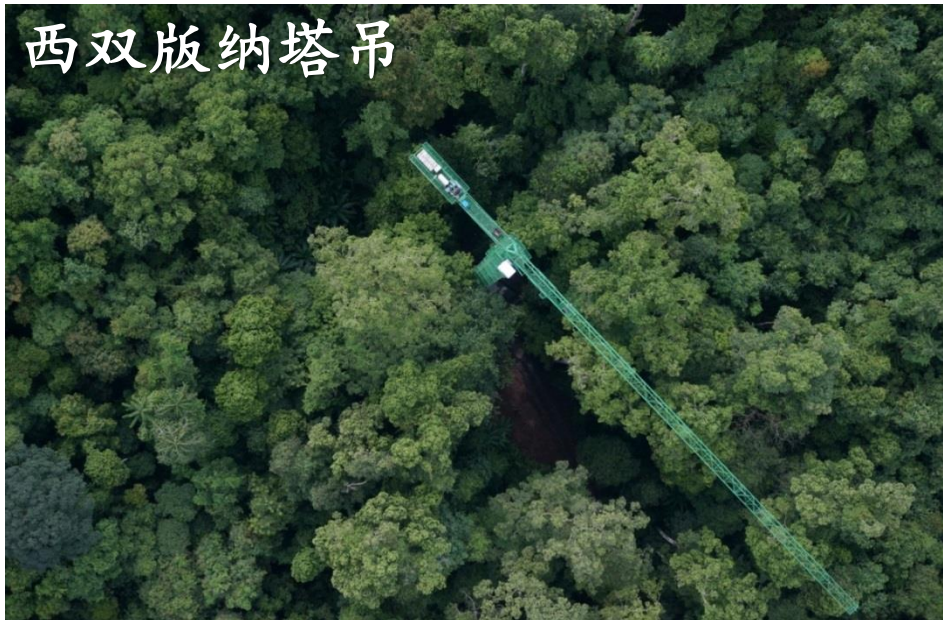
Monitoring of individual trees:  
Tree growth, seeds, litter, phenology, soil...



Area of monitoring sites in Forest Network in 2004-2020

# Highlights: Forest canopy monitoring

- Tower crane established at 8 forest sites in China
- Monitoring: Microclimate
  - Canopy phenology
  - Canopy insects





# Highlights: Mammal monitoring and protection



- Established “Camera Data Network for Wildlife Discovery Monitoring” in China
- Including 11730 sites, > 4 million pictures



野生动物多样性监测图像数据管理系统  
CameraData Network for Wildlife Diversity Monitoring

注册 admin 欢迎登录! 注销

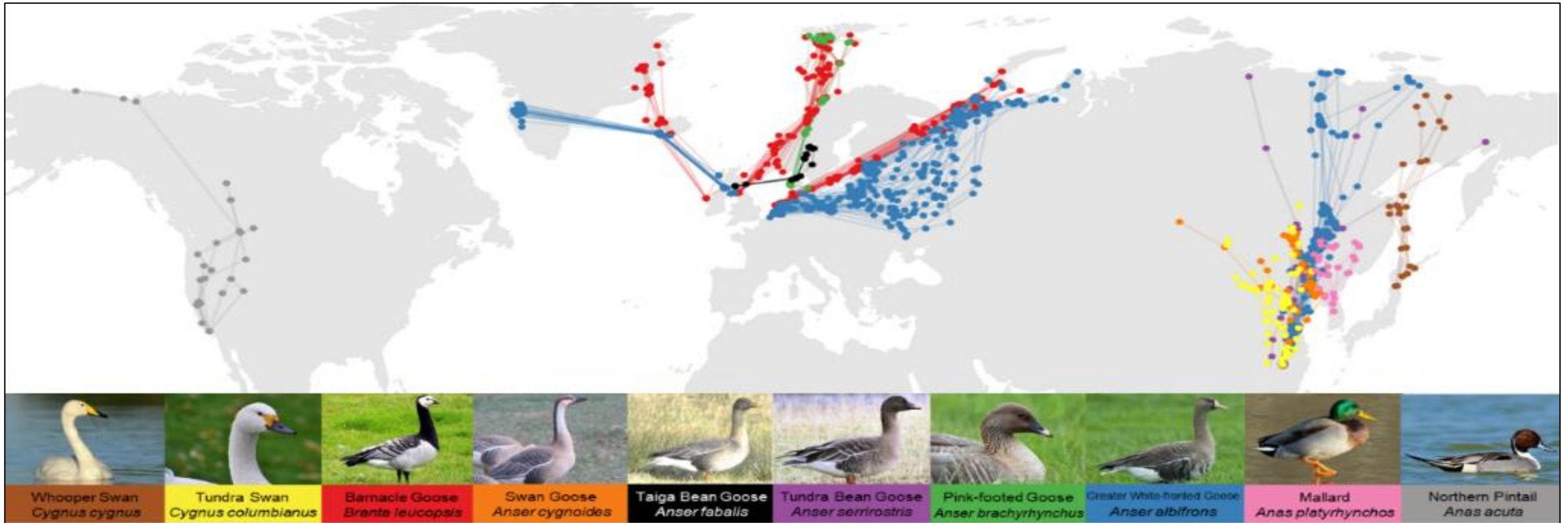
系统首页 成果展示 统计分析 数据管理 新闻动态 关于我们 系统管理



Ltl Acorn PM05 C 044°F 007°C

# Highlights: Tracking migrating birds in Asia

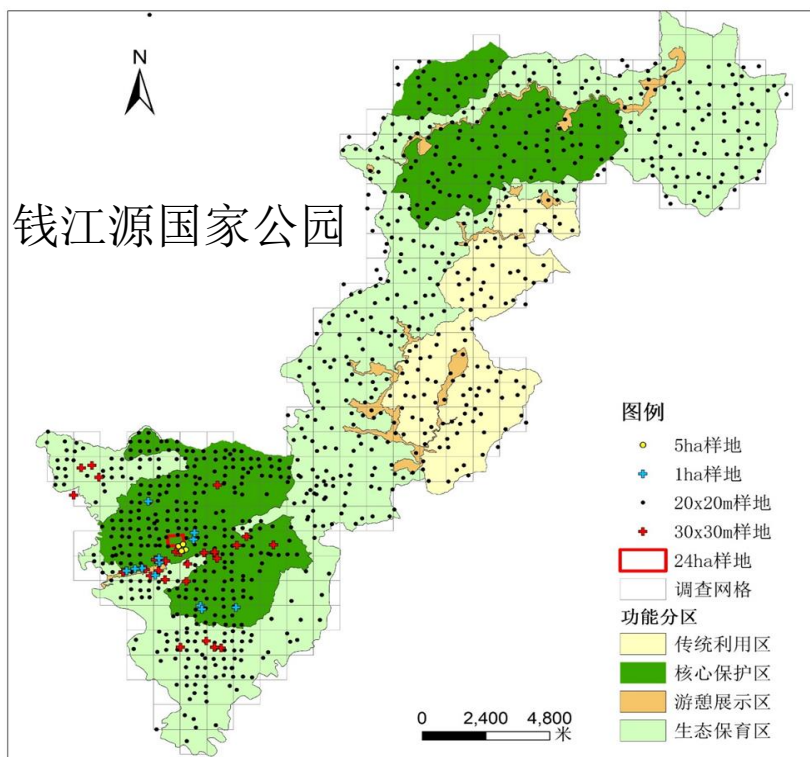
- Using satellite tracking, we traced **69 species** of migrating birds along **two major migration routes**, obtaining > 1 million data



# Scientific discoveries



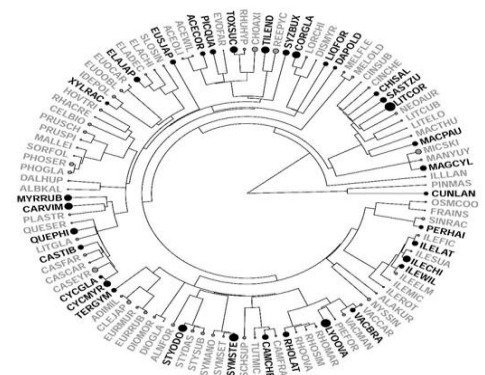
## □ Revealing plant-fungi interactions regulating the coexistence of species in subtropical forests



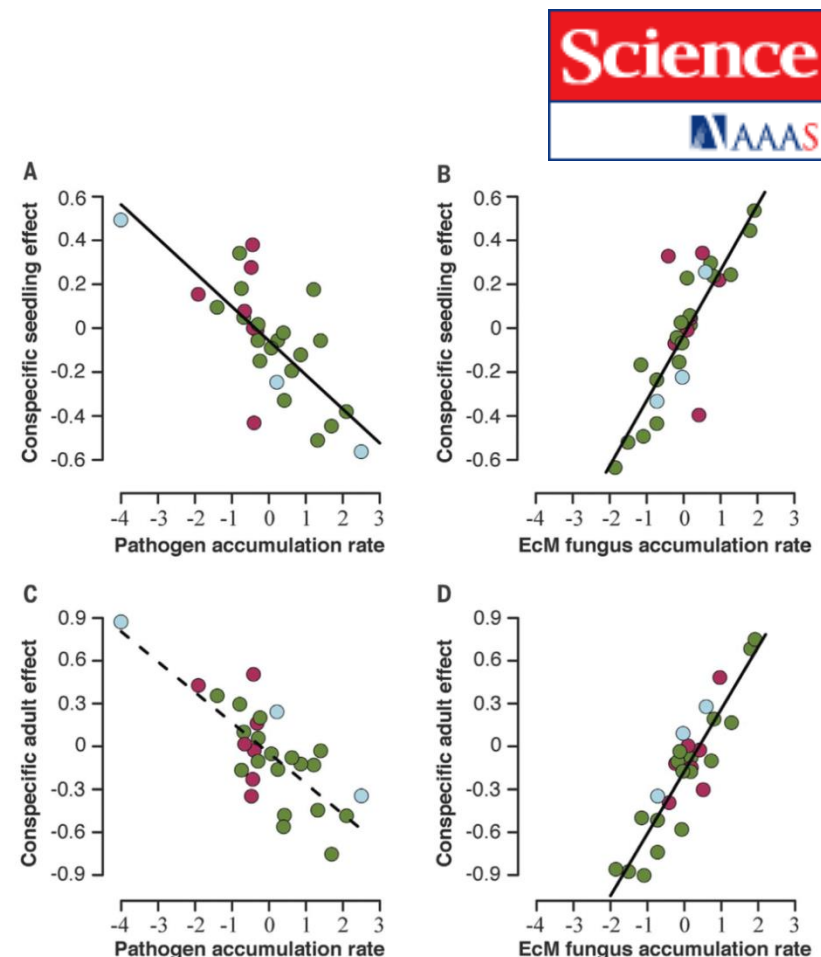
Gutianshan Forest Plots



Nine-year continuous monitoring of seedling dynamics



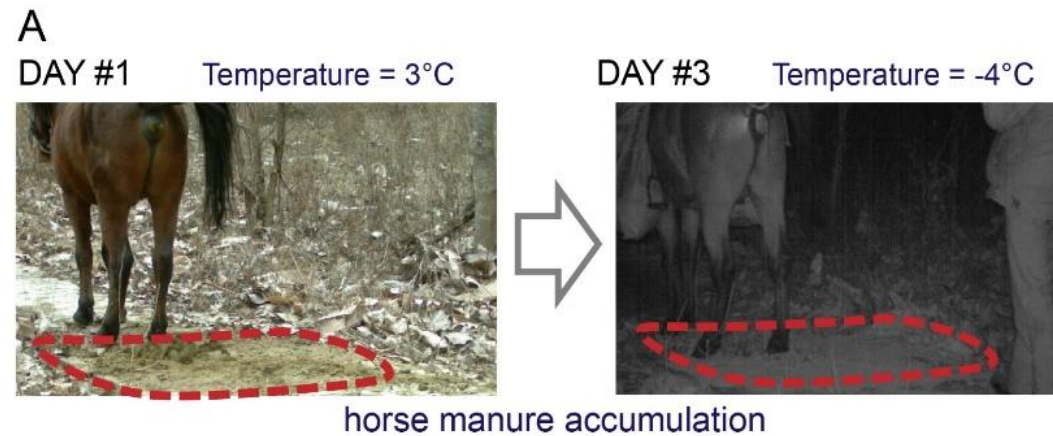
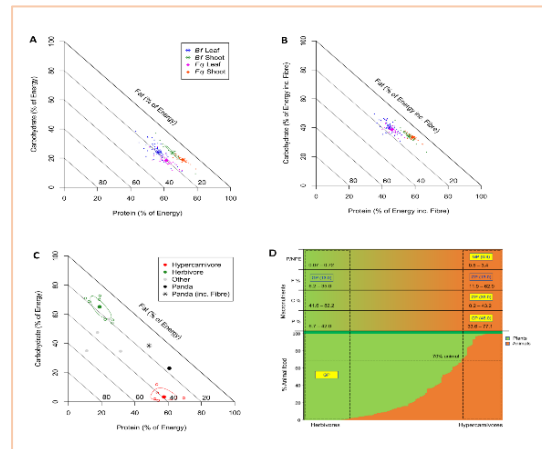
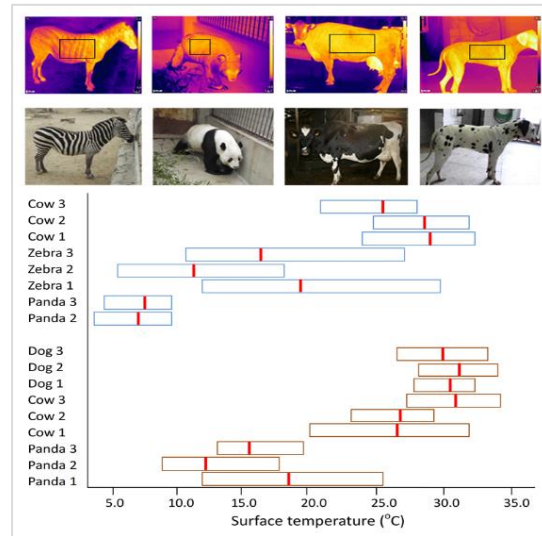
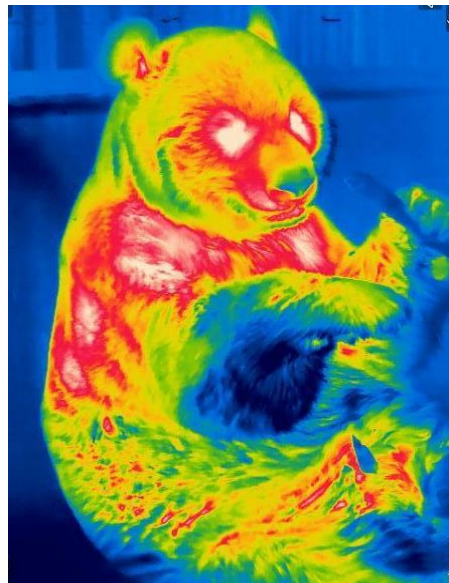
Rhizo-fungal community for 332 individual trees



Chen et al., 2019, Science

# Scientific discoveries

## Revealing adaptation behaviors of panda



# Public services



# THANK YOU

