

Protect Bat Populations and Habitat to Prevent Outbreaks

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**BIODIVERSITY AND COVID-19:
CAN WE PREVENT FUTURE OUTBREAKS ?**

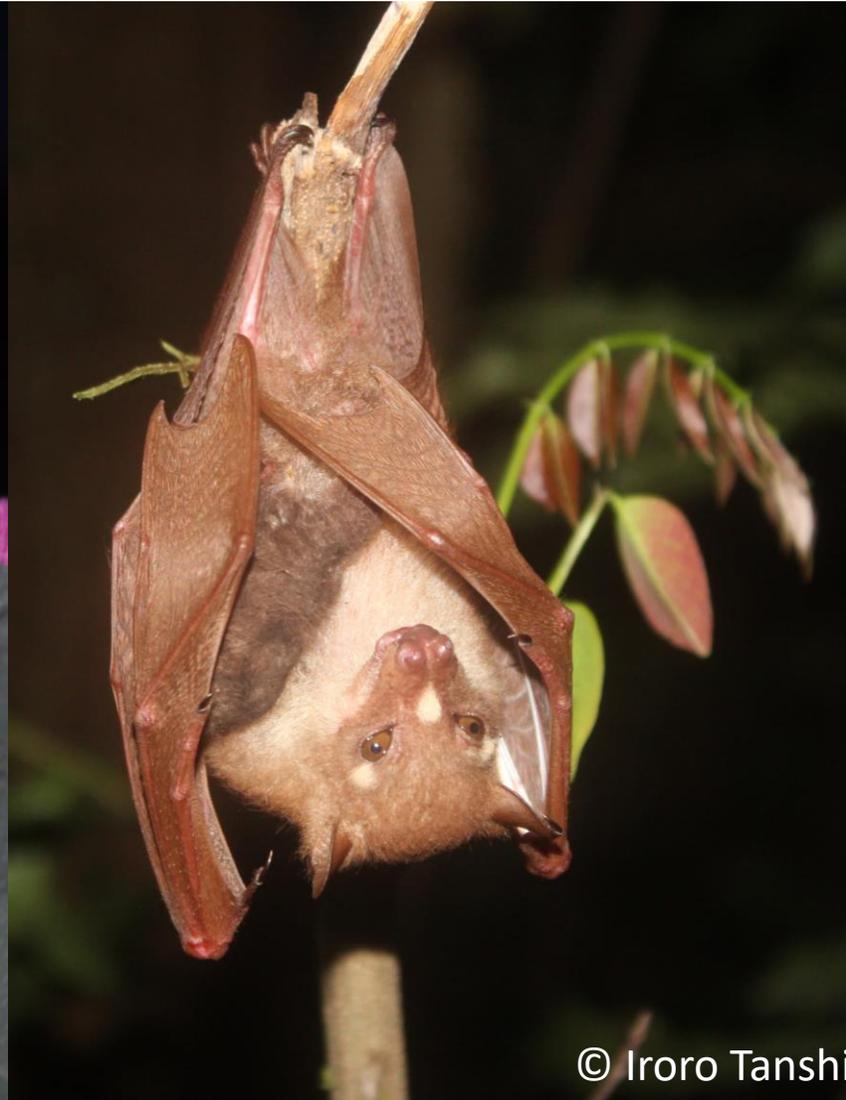
11:00 - 12:30 WAT, FRIDAY 5TH JUNE, 2020.

Bat 101: What is a bat?

Live young | hair | mammary glands – breastfeed young



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Bat 101: How many species of bats?

~ 100 known in Nigeria | ~300 species in Africa | 1400+ species worldwide

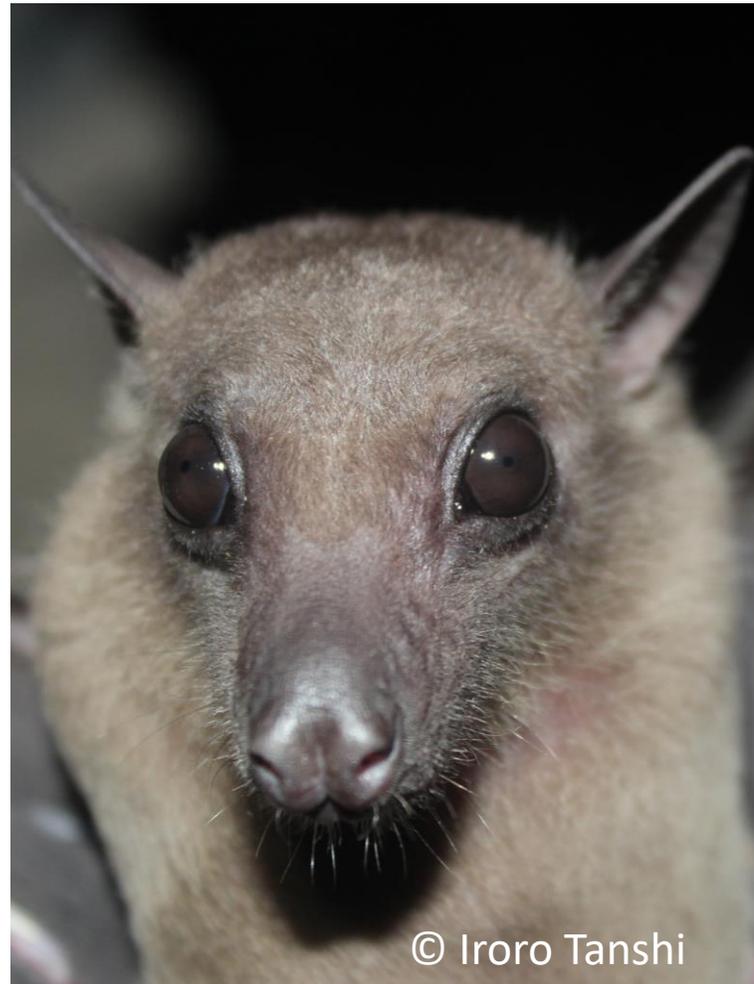


B



Bat 101: What do bats eat?

Fruit | nectar



Bat 101: What do bats eat?

Insects | fish | frogs | small birds | small mammals



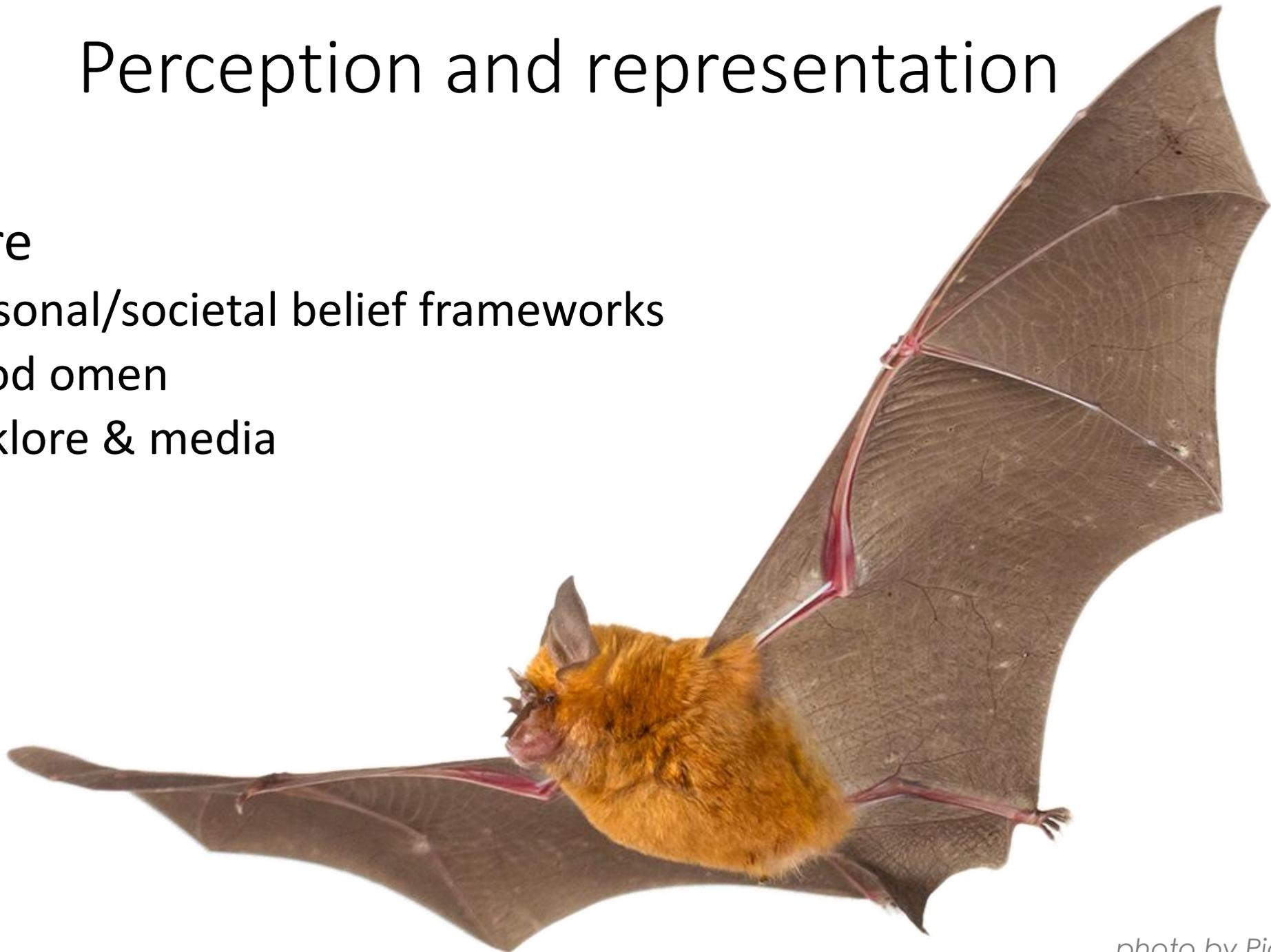
Why should we care?

- Ecosystem services
 - Fruit production e.g. dawa dawa
 - Tree planters e.g. shea butter
 - Agricultural pest suppression – estimated at \$3.7 - \$53 billion/year in the USA alone
- Tourism/recreation
 - Bat watching
- Health
 - Zoonotic diseases
 - medicine (desmoteplase)



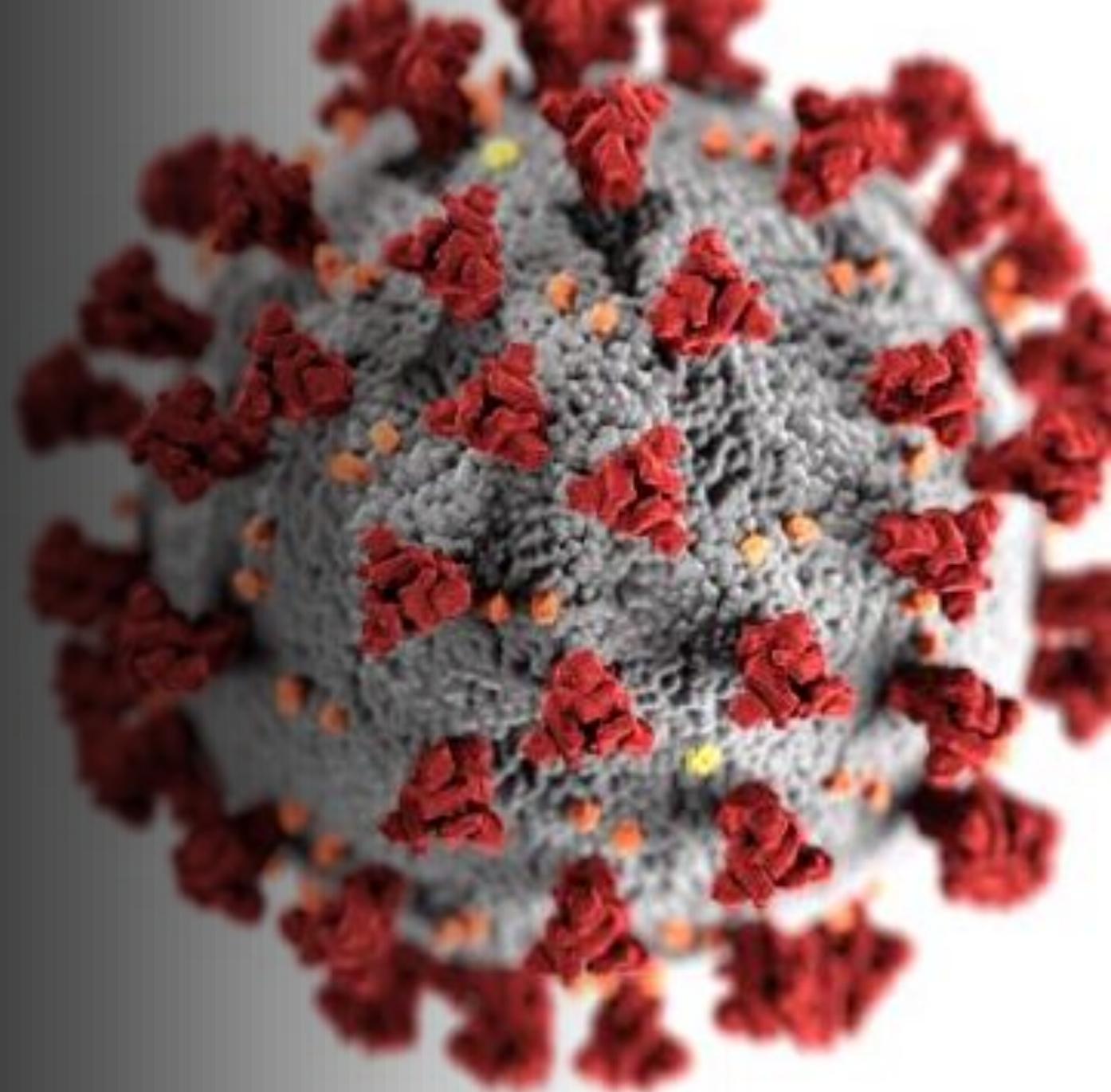
Perception and representation

- Culture
 - Personal/societal belief frameworks
 - Good omen
 - Folklore & media





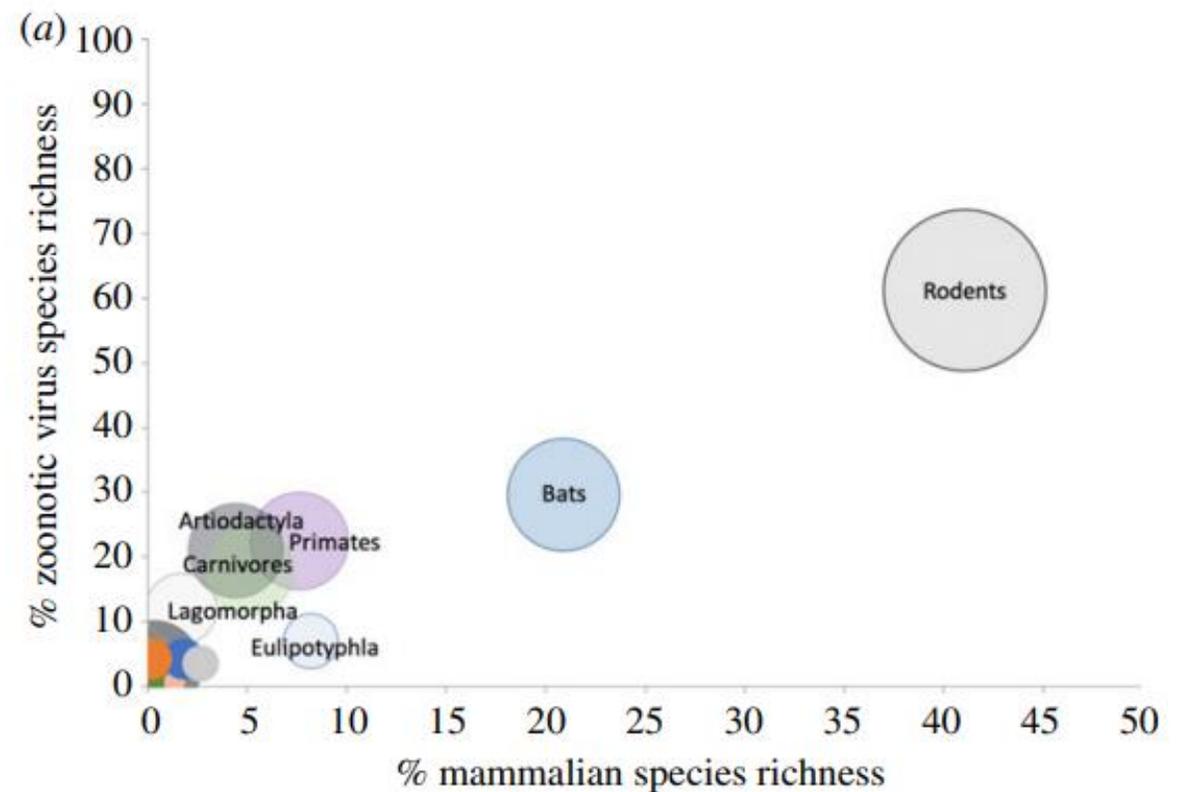
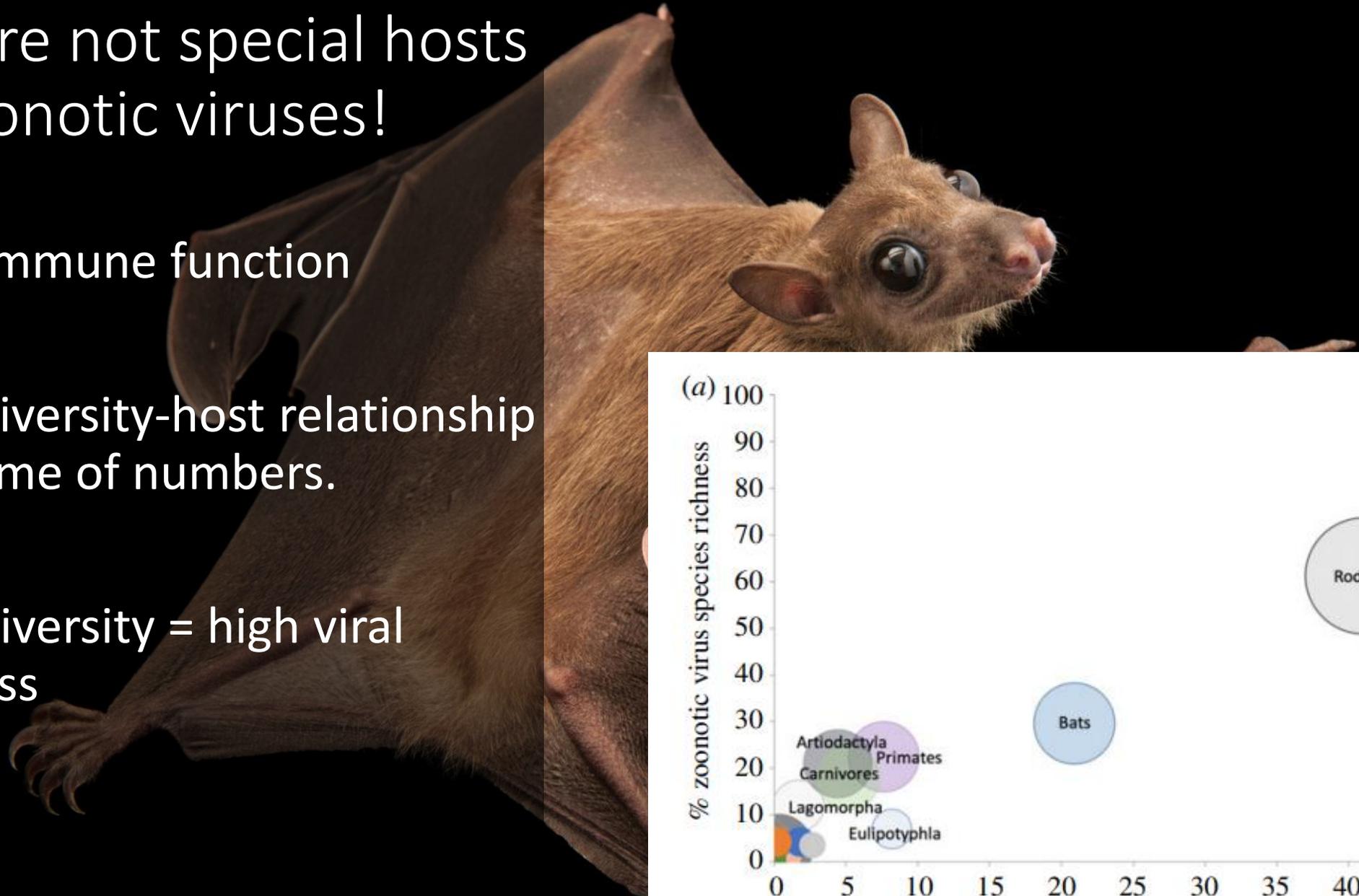
Bats and COVID-19: What do we know?



.....

Bats are not special hosts for zoonotic viruses!

- 24/7 Immune function
- Viral diversity-host relationship is a game of numbers.
- High diversity = high viral richness



Evidence suggests
inconclusive links
with bats



Not close enough

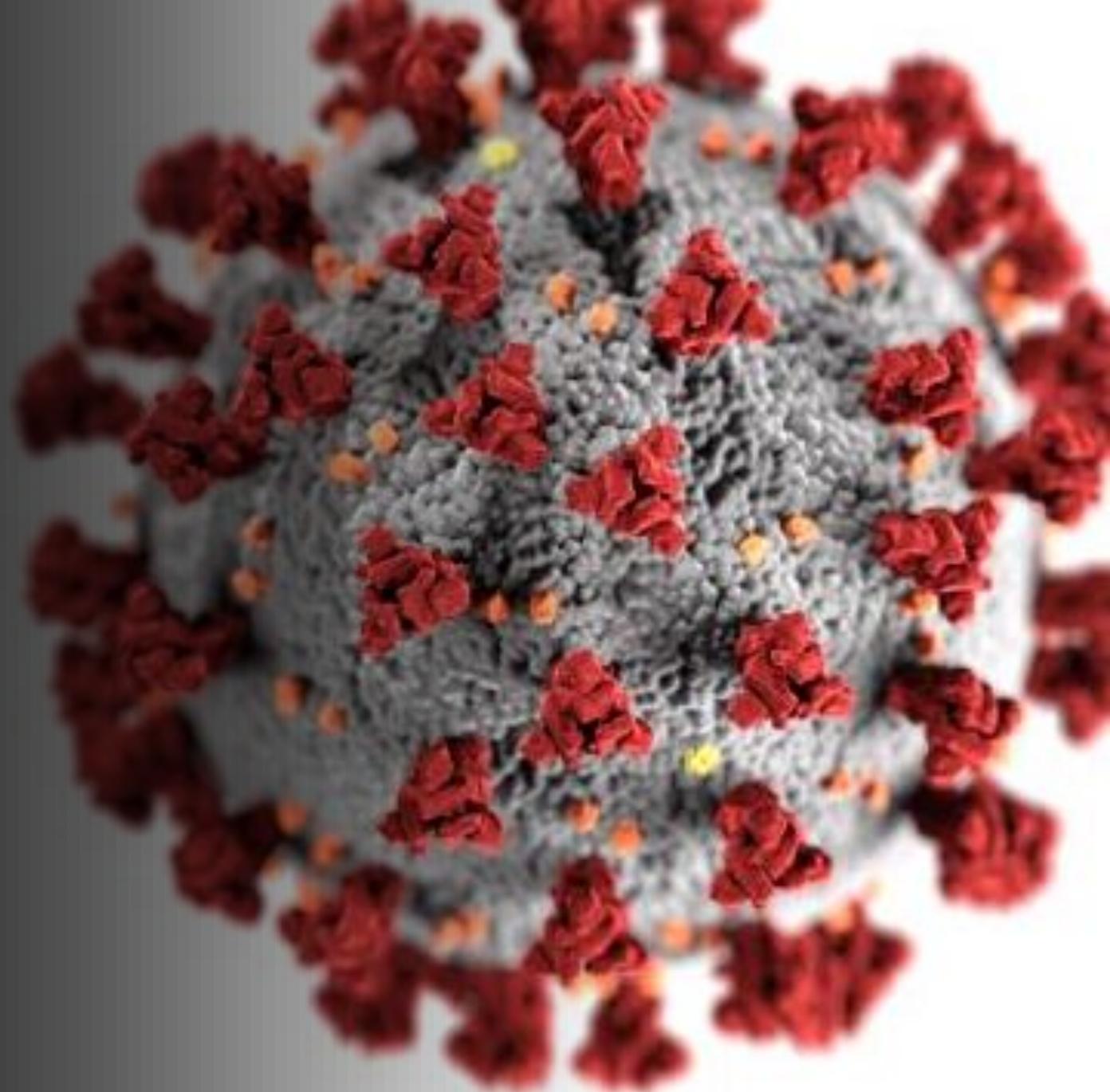


98% similarity

- Closest relatives of Sars-Cov2
 - 93% (RmYN02)
 - 96% (RaTG13)
- Sars-Cov2 arose 40 – 70 years ago (Independence - Nigerian civil war)

—

No evidence of bat-human transmission



Humans are
responsible
for outbreak
and
transmission

UC San Diego News Center

thisweek@ucsandiego

By Christine Clark

Apr 23, 2020

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Not classified

Reducing the risk of future emerging infectious disease outbreaks by changing social norms around urban bushmeat consumption and stopping its commercial trade

WCS CENTRAL AFRICA

Ill-advised bat-human interaction

- Hunting
 - Bat meat consumption
 - Persecution
-





Way forward



Protect bat roosts

- Culling is not an effective strategy.
- Cave in Uganda – Marburg resurgence.
- Stress and human health



Protect bat habitat

- Eliminate forest fires.
- Minimize deforestation.
- Rabies outbreak after clear-cut.



Eliminate risk of human-bat transmission

- Suspend wildlife surveys
- Early research suggest potential for human-bat transmission.



National action

- Laudable government leadership.
- Research on human dimensions and wildlife ecology
 - Carefully planned research into ecological association/links between wild populations.
- Socio-ecological investigations into human-wildlife interactions.



FEDERAL REPUBLIC OF NIGERIA

ONE HEALTH STRATEGIC PLAN 2019–2023



Federal Ministry of Health
Federal Ministry of Agriculture and Rural Development
Federal Ministry of Environment

Take home

- No evidence of bat-human transmission.
- Stop bat hunting and consumption.
- Protect bat populations.
- Protect bat habitat



photo by Piotr Naskrecki