Supporting the One Health approach in Belgium: identification of policy-relevant organisms and tissues by BopCo

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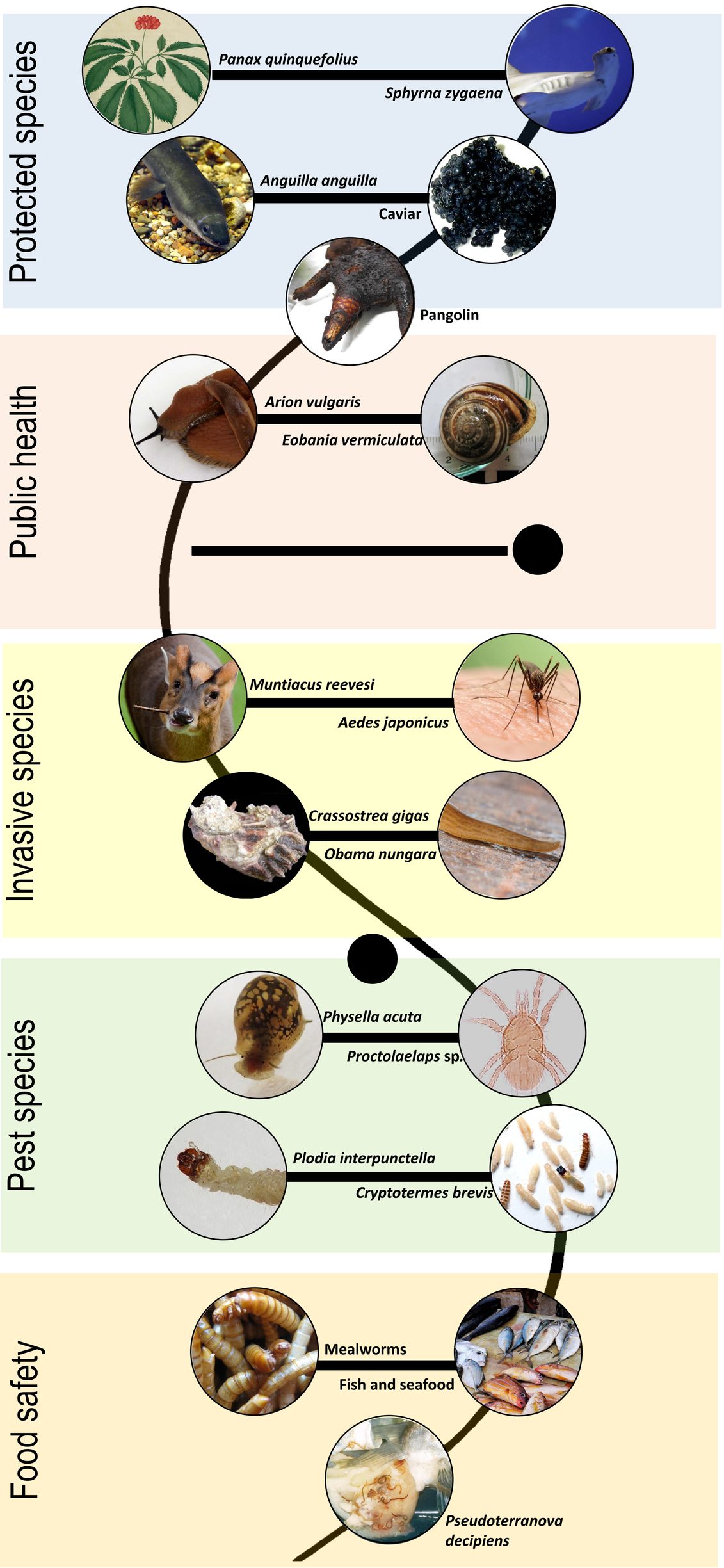
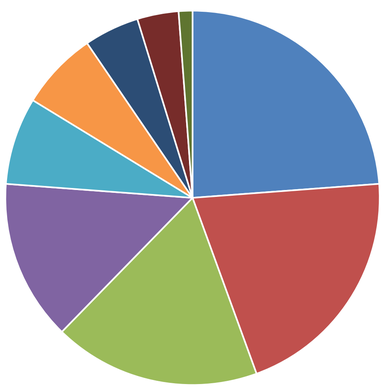
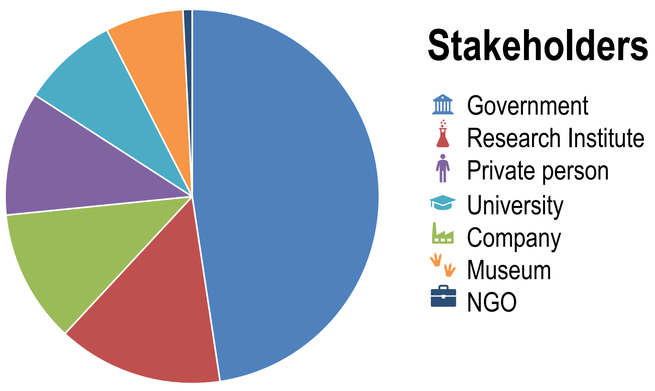


BopCo is a **species identification service** for biological samples of policy concern, jointly run by the Royal Belgian Institute of Natural Sciences (Brussels, Belgium) and the Royal Museum for Central Africa (Tervuren, Belgium).



BopCo acts as a focal point for the identification of biological materials of various **policy concerns**

BopCo's identification services cater to a diverse range of **stakeholders**



Species identifications rely on

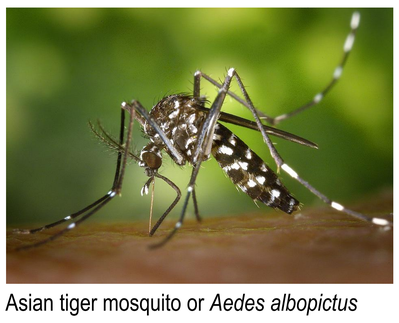
- **Morphology-based** approaches, employing the taxonomic expertise and specimen collections at the Royal Belgian Institute of Natural Sciences and the Royal Museum for Central Africa
- **DNA-based** techniques, such as DNA barcoding, qPCR, microsatellite analysis, and nanopore sequencing technologies, in BopCo's fully equipped molecular laboratories

Supporting the One Health approach in Belgium

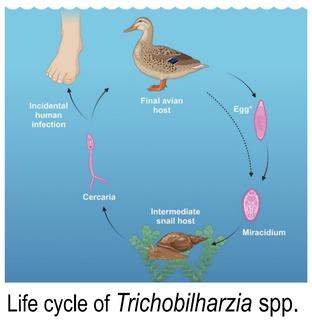
BopCo contributes to identifying the introduction pathways and dispersal dynamics of two **invasive mosquito species** in Belgium, *Aedes albopictus* and *Ae. japonicus*. Similarly, BopCo provides DNA-based identifications to study the **Culicidae mosquito diversity** at foreign deployment sites of the Belgian Armed Forces.

BopCo is also involved in the **monitoring of (exotic) animal product imports** into Belgium within the INTERCEPT project. We use DNA barcoding to identify meat intercepted from passenger's luggage at Brussels Airport, to prevent the import of transmittable animal diseases and the introduction of invasive alien species.

Furthermore, BopCo contributed to the **discovery of the first occurrence of *Trichobilharzia regenti* in Belgium**, a blood parasite of birds which may try to infect humans, triggering painful skin lesions known as "swimmer's itch".


Asian tiger mosquito or *Aedes albopictus*


Meat sampling at Brussels Airport customs



Life cycle of *Trichobilharzia* spp.

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