



Mary Seddon

Chair

Mary Seddon (1)

Red List Authority Coordinators

Monika Bohm (SRLI Freshwater Mollusc) (2)

Manuel Lopes-Lima (Freshwater Bivalve) (3)

Eike Neubert (European Landsnails) (4)

Howard Peters (Global Abalone) (5)

Julia Sigwart and Elin Thomas (Hydrothermal Vent) (6)

Frank Kohler (Australian Landsnails) (7)

Zoltán Fehér (European Molluscs) (8)

Maxim Vinaski (Freshwater Gastropods) (9)

Location/Affiliation

(1) UK

(2) Institute of Zoology, Zoological Society of London, London, UK

(3) Interdisciplinary Centre of Marine and Environmental Research (CIIMAR), University of Porto, Portugal

(4) Natural History Museum of Bern, Bern, Switzerland

(5) The University of York, York, UK

(6) Queen's University Belfast, UK

(7) Australian Museum, New South Wales, Australia

(8) Hungarian Natural History Museum, Budapest, Hungary

(9) Saint Petersburg State University, Saint Petersburg, Russia

Number of members

104

Social networks

Twitter: @SSC_Mollusc_sg



Mission statement

To provide information to IUCN on mollusc biodiversity conservation, the inherent value of species, their role in ecosystem health and functioning, the provision of ecosystem services, and their support to human livelihoods.

Projected impact for the 2017-2020 quadrennium

We aim to have over 8,700 species listed on the Red List by 2020. In terms of strategic importance, the Mollusc Specialist Group (MSG) expects to accomplish the following targets with direct or indirect impacts on the conservation of mollusc biodiversity: (1) completing the European Union (EU) combined report and presenting to ministers, to inform on the state of biodiversity and the possibility that without actions the EU would not achieve their Aichi Targets; (2) developing and testing on Key Biodiversity Area (KBA) monitoring protocols for freshwater systems (molluscs – gastropods and bivalves, fish, dragonflies, crustaceans and plants) in Morocco, that could be used in any freshwater system worldwide; (3) sharing knowledge on the conservation actions for land snails on islands: ex situ breeding, management of invasive species and reintroduction and translocation protocols; (4) sharing knowledge on the conservation actions for freshwater bivalves at the global level: survey, systematics, threat analysis, habitat management, ex situ breeding, management of invasive species, reintroduction and translocation

protocols, including papers from Australia, the US, South America, Asia, Russia, Japan, Europe, and Morocco; (5) recognition of an overlooked threatened habitat with endemic marine species in deep ocean hydrothermal vents; and (6) various small Mohamed bin Zayed Species Conservation Fund grants on local projects.

Targets for the 2017-2020 quadrennium

Assess

Red List: (1) conduct Red List assessment of assorted groups of land snails; (2) conduct Red List assessment of freshwater molluscs (snails and bivalves); (3) fundraise for Red List assessment of freshwater molluscs; (4) conduct Red List assessment of marine molluscs.

Research activities: (1) study freshwater bivalves in Morocco; (2) publish review paper on freshwater bivalves; (3) publish paper on threats to hydrothermal vents molluscs; (4) engage in the development of eDNA methods for detection of freshwater molluscs; (5) engage in additional national level planning for species conservation; (6) identify introduced species, threats to native biodiversity; (7) list and document introduced molluscs of India; (8) expand knowledge on freshwater molluscs in South America.

Plan

Planning: (1) develop protocols managed by MSG for the IUCN Centre for Mediterranean Cooperation on how to monitor freshwater KBAs, fish, dragonflies and plants; (2) test protocols scoping workshop managed by MSG for the IUCN Centre for Mediterranean Cooperation on how to monitor freshwater KBAs, fish, dragonflies and plants; (3) develop guidelines for management of molluscs in freshwater systems.



Hanleyella henrici, assessed in 2020 for the Vent Red List, which will be published in 2021
Photo: Julia Sigwart & CHong Chen

'Preliminary data on fish hosts and their conservation importance for the Critically Endangered *Pseudunio maroccanus* (Pallary, 1918)'. To be published in *Aquatic Conservation: Marine and Freshwater Ecosystems*. (KSR #12)

ii. A taxonomic revision was published for the Mexican freshwater bivalve genus *Popenaias*: Inoue, K., et al. (2020). 'A new species of freshwater mussel in the genus *Popenaias* Frierson, 1927, from the Gulf coastal rivers of central Mexico (Bivalvia: Unionida: Unionidae) with comments on the genus'. *Zootaxa* 4816(4):457–490. <https://doi.org/10.11646/zootaxa.4816.4.3> (KSR #43)

iii. There are several ongoing projects using eDNA methods for detection of freshwater molluscs in North America and Europe. For example, members in Texas began to develop eDNA methods to detect the presence of freshwater spring snails: 64 sites were surveyed for endangered spring snails of the families Hydrobiidae, Cochliopidae, and Assimineidae; in addition, around 20 sites were surveyed for phreatic and stygobitic snails of the family Cochliopidae. In France/Europe, an eDNA atlas for threatened species is being developed, which includes freshwater bivalves. (KSR #43)

iv. On Vancouver Island, Canada, studies of a relict population of *Allogona townsendiana* (federally listed in Canada) were curtailed in 2020 due to pandemic restrictions. (KSR #43)

v. The Daisy Project to identify introduced species and the threats they pose to native biodiversity is ongoing. (KSR #43)

vi. Introduced molluscs of India: the role of citizen scientists is immense in cataloguing biodiversity. Open-access platforms such as the India Biodiversity Portal and iNaturalist have provided a space for documenting introduced molluscs, especially in terrestrial habitats. For example, the recently introduced slug

Act

Conservation actions: (1) implement *Partula* Project in French Polynesia; (2) reintroduce Greater Bermuda Land Snails (*Poecilozonites bermudensis*); (3) support motion on preventing impact of bauxite mining on land snails of Atewa Forest, Ghana.

Communicate

Communication: publish the Mollusc Specialist Group newsletter, *Tentacle*.

Scientific meetings: (1) contribute to a conference on Pacific land snails, especially on management of alien invasive species; (2) ensure members regularly communicate on mollusc research and conservation.

Activities and results 2020

Assess

Red List

i. Thirty-three (33) Australian land snails (out of around 100 submitted) and 21 Southeast Asian land snails were published on the IUCN Red List in 2020. In addition, members from Canada engaged in the preparation of draft status assessment summaries for two terrestrial gastropods (*Magnipelta mycophaga*, *Vertigo rowellii*) for the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) Mollusc Specialist Subcommittee; these assessments are part of a 10-year reclassification required under the federal Species at Risk Act. (KSR #1)

ii. One hundred and thirty-two (132) assessments or reassessments for freshwater molluscs were published in 2020, mainly from Africa and Southeast Asia. (KSR #1, 2)

iii. In 2020, we assisted with the case to the EU for reassessment of Red Lists for land snails and freshwater molluscs (22% of land snails and 46% of freshwater snails were assessed as threatened in 2011). Reassessment of 1,200 land snails and 800 freshwater molluscs in Europe is due to start 2022–2023. (KSR #1, 2)

iv. Assessments of hydrothermal vent molluscs continued in 2020 and the assessment process for the Vent Red List will conclude in 2021. Forty-six (46) species were published in 2020, with another 50 or so species assessed and ready for submission. A manuscript on the assessment approach taken for these highly restricted and insular species was submitted to the journal *Conservation Biology* and will be published in 2021. Assessments of abalone were delayed due to COVID-19 but continue and will be submitted/published in 2021, with a scientific paper to follow. (KSR #1)

Research activities

i. Freshwater bivalves in Morocco: this project is ongoing. An assessment of fish hosts was carried out for the Critically Endangered *Pseudunio maroccanus*, and results were submitted and accepted for publication (to be published in 2022): Benaissa, H., et al. (2022).

Fieldwork in Atewa forest, Ghana, a species-rich and endemic-rich upland evergreen forest threatened by aluminium ore extraction.

This work contributed to the motion on preventing impact of Bauxite Mining on Landsnails of Atewa Forest (Target 2020-5)

Photos: Peter Tattersfield



Eleutherocaulis haroldi (Veronicellidae) has 53 records in the citizen science portal as opposed to 16 in the published literature. To date, 21 species belonging to 16 families and 20 genera are reported from India: eight are terrestrial, five are freshwater and eight are marine. Among land snails, three species, namely *Lissachatina fulica*, *Allopeas gracile* and *Laevicaulis alte*, are widely distributed, occurring almost throughout India except in high altitude cold regions of the Himalayas and dry and arid desert regions in north-western India. From freshwater, *Haitia acuta* and from marine, *Mytilopsis sallei* have been reported. There are also unconfirmed reports of the presence of *Euglandina rosea* in mainland India and the Andaman Islands. Citizen science initiatives such as Mapping Snails and Slugs (MISS) and Spotting Alien Invasive Species (SPIAS) in the India Biodiversity Portal have been initiated for mapping Indian introduced molluscs (and other species). The compilation will help natural habitat and ecosystem managers and policymakers to take proactive steps in managing the introduced species. This compilation also prompts researchers to undertake studies on the impact of these species on local biodiversity, ecosystems and human health. (KSR #13, 43)

vii. Freshwater molluscs in South America: two projects were due to start in 2020 but were delayed due to COVID-19. In Argentina, due to the closure of laboratories and the necessity of working from a home office (as a result of the COVID-19 pandemic), the databases of freshwater molluscs have been updated based on records in malacological collections, that is, analysis of new pre-pandemic collections, as well as publications since 2008 and 2010, when the latest updates were made

for bivalves and gastropods. This will assist conservation assessment works. The second project, 'Conservation of freshwater bivalves of Río de la Plata basin', received funding in 2020 from the Mohamed bin Zayed Foundation. The main goal of this project is to evaluate the conservation status of the mussels of the Río de la Plata basin. The project will include field surveys, several analyses and finally a workshop for species evaluation, following the IUCN criteria. Because of the COVID-19 pandemic, the schedule is delayed. The field and museum surveys are now indefinitely postponed; however, we are working on a robust database as a baseline for future studies. (KSR #43)

Plan

Planning

i. The European Cooperation in Science and Technology (EU COST) project on guidelines for management of molluscs in freshwater systems continues into the new quadrennium (project is ongoing to 2022). A set-up meeting was held via Zoom in 2020, and various online meetings are planned for 2021. (KSR #15)

Act

Conservation actions

i. *Partula* Project in French Polynesia: the plan for 2020 was for four shipments of snails to be sent to Tahiti for release onto four islands; however, due to the severe restrictions imposed by SARS-CoV-2, no shipments occurred and consequently there were no releases in 2020. Reintroductions are set to resume in 2021. (KSR #24)

ii. Reintroduction of Bermuda land snails: during a field visit in February 2020, we monitored Greater Bermuda Land Snails (*P. bermudensis*) on three small islands with previous reintroductions, augmented populations on two islands, and carried out

introductions on three new islands. We also initiated reintroduction of Lesser Bermuda Land Snail (*P. circumfirmatus*), reared in captivity since the early 1980s, to a small offshore island and experimented with both staged, soft release and hard release approaches. Additionally, presentations on monitoring, captive breeding and history of reintroductions of Bermuda land snails were given to the Bermuda Zoological Society. (KSR #24)

Policy

i. There is local and international opposition to the mining proposals in the Atewa Forest. Three species of land snails were assessed for the Red List and published in 2019/2020, and reports sent to assist drafting a proposal against strip mining for the IUCN World Conservation Congress and impact on birds, mammals, snails, etc. In 2020, associated with the postponed World Conservation Congress in Marseille, France, IUCN passed Motion 103 urging the Ghanaian Government to immediately and permanently halt all mining-related operations and other destructive activities in Atewa Forest, and to establish a national park over the entirety of Atewa Forest to ensure its conservation in perpetuity. (KSR #31)

Communicate

Communication

i. *Tentacle* newsletter 28 was published in March 2020. (KSR #28)

Scientific meetings

i. Notable meetings included the American Malacological Society, Virtual Meeting, 2020; however, many meetings, like Euromal 2020, were postponed to 2021 due to COVID-19. (KSR #28)



In memoriam Trevor Coote (1953-2021) – Partula Snail project. Trevor was the lynchpin of the partulid reintroduction programme in the Society Islands of French Polynesia and will be sorely missed
Photo: Paul Pearce Kelly

Summary of activities 2020

Species Conservation Cycle ratio: 4/5

Assess **11** ██████████

Plan **1** █

Act **3** ███

Communicate **2** ██

Main KSRs addressed: 1, 2, 12, 13, 15, 24, 28, 31, 43

KSR: Key Species Result