

Issue 39: September 2022



Welcome

As the days get longer and warmer, many of our staff are busily preparing for the upcoming field season, and for the 3rd Victoria Nature Festival. However, there has still been a lot of activity over the winter months – we have hosted seminars for NAIDOC Week and Science Week, launched ARI's 50th anniversary commemorative book and, of course, braved the cold, wet weather to undertake fieldwork across Victoria.

This Biodiversity Month issue of our eNews features projects that support the management and conservation of threatened species, highlighting the diversity of species and ecosystems that we work with. Find out about our collaborations helping to conserve platypus, projects to manage threats to potoroos and bandicoots, and programs supporting the management of critically endangered native grasslands. I hope you enjoy reading!

Keep well

Fern Hames

Director
Arthur Rylah Institute for Environmental Research

Recent Research



Understanding threats to potoroos and bandicoots

ARI researchers have long been involved in research and conservation efforts to support our small native mammals. As part of these efforts, camera trapping and computer modelling are used to help understand the impacts of invasive predators, and provided a baseline against which to measure the impact of the 2019-20 bushfires.

Find more about this project on our website



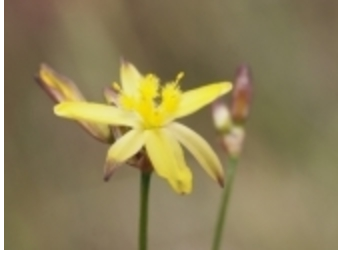
Helping platypus

The platypus is an iconic Australian animal facing a range of challenges. To help its recovery, ARI has been collaborating with conservation groups and management agencies on projects ranging from a comprehensive threat analysis to statewide mapping of instream barriers which might affect platypus movement.

Find more about this project on our website

Protecting critically endangered grasslands on private land

Grasslands are among the most threatened ecosystems in Victoria. ARI researchers have been working with partner agencies to help manage grasslands on farms.



Projects include monitoring to detect changes after management actions (like burning and weed control) and using modelling to identify high-priority sites for further action.

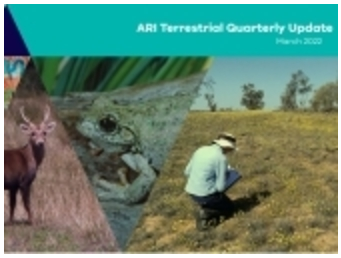
Find more about this project on our website



ARI 50th commemorative book

ARI turned 50 in 2020. We are hugely proud of our legacy and decades of delivering science that matters. To mark this milestone, we created a commemorative book to remember and celebrate the people, the place and our achievements. It's amazing to reflect on the many contributions and changes, and exciting to think about the future ahead.

To view a PDF copy of *People Passion Science. Celebrating 50 years of the Arthur Rylah Institute for Environmental Research* follow this link.

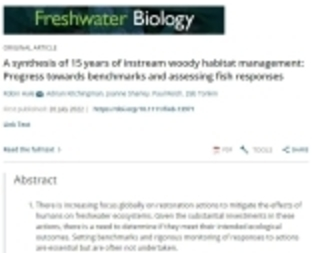


ARI quarterly research updates

Recent editions of our Aquatic and Aquatic Influence (Autumn 2022) Quarterly Updates and the Terrestrial Quarterly Update are now available.

They feature new projects and research on the effectiveness of riparian fencing, the impacts of grazing on alpine bogs, and counting the cockatoos of south-eastern Australia.

Interested in receiving these directly? All are welcome to sign up!



Recent journal articles (link to abstract) and reports (link to PDF) include:

Batpurev, K., Liu, C., Sinclair S.J., Avirmed, O. and Olson, K. (2022). Monitoring the condition of rangelands in the Gobi Desert: Monitoring strategies to detect change. Arthur Rylah Institute for Environmental Research Technical Report Series No. 337. Department of Environment, Land, Water and Planning, Heidelberg, Victoria.

Fogarty, F.A., **Yen, J.D.L.**, Fleishman, E., Sollman, R. & Ke, A. (2022). Multiple-region, N-mixture community model to assess associations of riparian area, fragmentation, and species richness. Forest Service Research Data, online early

Hale, R., Kitchingman, A., Sharley, J., Reich, P., & **Tonkin, Z.** (2022). A synthesis of 15 years of instream woody habitat management: progress towards benchmarks and assessing fish responses. Freshwater Biology, online early

Maceda-Veiga A., Mac Nally R., de Sostoa A. & **Yen J.D.L.** (2022). Patterns of species richness, abundance and individual-size distributions in native stream-fish assemblages invaded by exotic and translocated fishes. Science of the Total Environment **838**, Part 1

Main, A., Greet, J., **Vivian, L.** & **Jones, C.** (2022). Warmer water temperatures exacerbate the negative impacts of inundation on herbaceous riparian plants. Freshwater Biology 67 (7), 1162-1173

Menkhorst, P.W. and Thompson, L. (2022). Assessing waterbird susceptibility to disturbance by duck hunters in Victoria (2022 update). Arthur Rylah Institute for Environmental Research Technical Report Series No. 338. Department of Environment, Land, Water and Planning, Heidelberg, Victoria.

O'Connor, J., Hale, R., Mallen-Cooper, M., Cooke, S.J. & Stuart, I. (2022). Developing performance standards in fish passage: integrating ecology, engineering and socio-economics. Ecological Engineering 182, 106732

Raadik, T.A., Stoessel, D.J., Ryan, S. and Murphy, N. (2022). Locating the threatened Glenelg Freshwater Mussel in the lower Glenelg River system: Remote sensing and physical sampling. Arthur Rylah Institute for Environmental Research Technical Report Series No. 345. Department of Environment, Land, Water and Planning, Heidelberg, Victoria.

Ramsey, D., Forsyth, D., Perry, M, Thomas, P., McKay, M. & Wright, E. (2022). Using helicopter counts to estimate the abundance of Himalayan tahr in New Zealand's Southern Alps. The Journal of Wildlife Management 86 (6)

Scroggie, M.P. and **Ramsey, D.S.L.** (2022). Predicting the dynamics of south-eastern Australian rabbit populations under climate change. Technical Report Series No. 336. Department of Environment, Land, Water and Planning, Heidelberg, Victoria.

Senior, A.F., **Clemann, N.,** Gardner, M.G., Harrisson, K.A., While G.M. & Chapple, D.G. (2022). Genetic structure, diversity and distribution of a threatened lizard affected by widespread habitat fragmentation. Conservation Genetics 23, 151-165

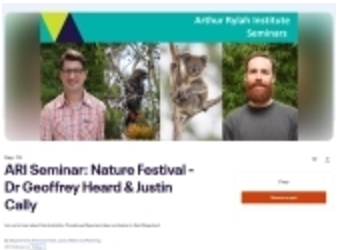
Sumner, J., Haines, M.L., Lawrence, P., Lawrence, J. & **Clemann, N.** (2022). Phylogenetic placement of a recently discovered population of the threatened alpine she-oak skink *Cyclodomorphus praealtus* (Squamata: Scincidae) in Victoria. Memoirs of Museum Victoria 80, 153-157

van Harten, E., Lawrence, R., **Lumsden, L.,** Reardon, T., Bennett, A. & Prowse, T. (2022). Seasonal population dynamics and movement patterns of a critically endangered, cave-dwelling bat, *Miniopterus orianae bassanii*. Wildlife Research

van Harten, E., Lawrence, R., **Lumsden, L.F.**, Reardon, T. & Prowse, T.A.A. (2022). Novel passive detection approach reveals low breeding season survival and apparent lactation cost in a critically endangered cave bat. Scientific Reports 12**,** 7390

van Eeden, L.M., **Geschke, A.**, **Hames, F.**, **Squires, Z.E.** & Weston, M.A. (2022). The leashing behavior of dog owners in different types of natural areas. Human Dimensions of Wildlife

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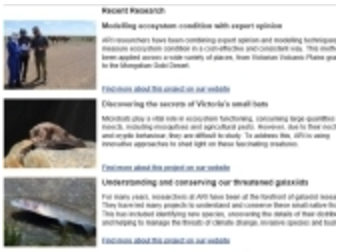
ARI Seminar Series (online)

Our next seminar will be part of the Victoria Nature Festival. On **Monday 19th September,** we will learn about the National Threatened Species Index with Dr Geoff Heard (University of Queensland) and Koala populations in East Gippsland with Justin Cally (ARI).

Register at Eventbrite via this link.

To receive ARI seminar series email alerts, including webinar (live online viewing) details and follow-up links to recordings, use the 'Subscribe to ARI' button on our website, or email us at research.ari@delwp.vic.gov.au

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