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BSc (Hons)

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Summary

This project aims to develop and validate new methods to determine age, growth rates and recruitment dynamics in two of Australia's most popular freshwater angling species, the Australian bass and the Golden perch. River fragmentation and flow alteration has affected the habitat of these species throughout much of its range, causing concern for the long-term sustainability of these species. Previous age-growth research has employed otolith-derived methods; a lethal technique requiring extraction of the ear bone to count annuli. Novel DNA Methylation-based biomarker techniques are non-lethal and have produced robust results within other species. Using field-sampling at various locations throughout the species' range, and under varying flow regimes, the proposed research aims to validate the emerging DNA Methylation-based biomarker age-growth technique against the accepted otolith-derived method in Australian Bass and Golden perch. Ultimately, reducing the sacrifice of specimens for research purposes, and determining hydro-ecological factors influencing age-growth and recruitment will improve the management of this species into the future.

Research Expertise

- Freshwater Ecology
- Fish chronology
- Larval chronology