



REEF

LIFE

2024 ANNUAL REPORT

SURVEY



Reef Life Survey Foundation

RLSF 2024 ANNUAL REPORT

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This report was designed and compiled by
Antonia Cooper and Joanna Schmid.

Photos by Rick Stuart-Smith & Antonia Cooper

The Reef Life Survey Foundation is a non-profit environmental organisation. Donations to the RLSF are tax-deductible and support ongoing monitoring of the marine environment around Australia. www.reeflifesurvey.com

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The background of the entire page is an underwater scene. The top half is a dark blue gradient with several fish swimming. The bottom half shows a vibrant coral reef with various colors like orange, red, and purple. The text is overlaid on the top half.

OUR VISION

Improved knowledge & condition of reef systems

OUR MISSION

To inspire & engage a global volunteer community to survey reefs using scientific methods, & share knowledge about the marine ecosystem

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PART 1

OVERVIEW

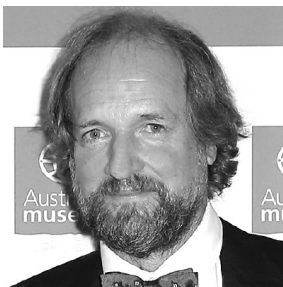
RLS BOARD



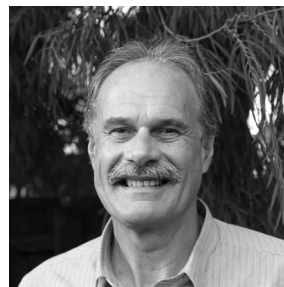
Rick Stuart-Smith
President



Margo Smith
Community Dive
Representative



Graham Edgar
Executive Officer



Peter Mooney
Management
Representative



SECRETARIAT

Antonia Cooper
Programs, Logistics, Data
& Financial Officer

Lizzi Oh
Database Management

Margo Smith
Safety Officer

Joanna Schmid
Support Officer

ADVISORY COMMITTEE

Steffan Howe
Parks Australia - Management

Antonia Cooper
IMAS - Science

Nathan Knott
NSW DPI - Management

Cath Samson
Parks Australia - Management

Rick Stuart-Smith
IMAS - Science

Alan Jordan
NSW DPI - Management

David Logan
Parks Australia - Management

Graham Edgar
IMAS - Science

Danny Brock
SA DEWNR - Management

Tom Holmes
Parks WA - Management

Joanna Schmid
IMAS

Jamie Hicks
SA DEWNR - Management

Neville Barrett
IMAS - Science

Margo Smith
RLS diving community

Michael Sams
Parks VIC - Management

Amanda Richley
RLS diving community

Monique Bregman
Parks VIC - Management

John Turnbull
RLS diving community

Peter Mooney
Management

Andrew Green
RLS diving community

Paul Day
RLS diving community



PRESIDENT'S REPORT

I confess. I often feel so run off my feet that I look down at them, or on the road ahead, instead of stopping and looking at everything around me and celebrating the wins in the moment. It is usually only once a year, when the team at RLS HQ (shout out here to Toni and Jo) put together all the stats for the year and compile the annual report draft, that I actually stop and reflect on just how impressive this RLS machine is. It's the time of the year that we sum up all the little wins and realise just how much they add up to. This year has been phenomenal, with record or near-record tallies for everything: surveys (over 1,400), countries (15), webpage views and socials (our website was hopefully found useful over 320 thousand times

in the year), outputs and citations in scientific literature (>90). It is staggering to consider what this means in terms of the generation of new knowledge by RLS members and the usage of this by scientists and the public. I think it is a massive contribution to the world in the space of a year, that well exceeds reasonable expectations from our financial resourcing, and is only made possible because our volunteer divers, collaborating scientists and students all see a bigger picture and work together toward a shared goal.

Some important wins in 2023-24 were continued and growing contributions by international RLS teams. Our Spanish, Italian, French, Canadian, and US crews



have all been chipping in, taking stock of reefs all over the world. This international effort is evident in the Scoresby Shepherd Awards this year, with the survey prize going to an international RLS diver for the first time and the distinguished contribution award going to the leader of surveys across New Zealand and the southwest Pacific (no spoilers here, go to page 23 to find out who).

Closer to home, turning towards the cogs of the machine operating the background, I would like to take this opportunity to formally recognise and thank Margo Smith for her contributions to the RLSF board over the years. Margo has brought a unique brand of wisdom

and empathy to the board over four terms, since the incorporation of the RLS Foundation in 2011. This year she has decided not to re-nominate for another term on the board, but we hope that she still has the energy to remain an active and key member of RLS for years to come. On behalf of the board and all RLS members, thank you Margo!

RLS President, Rick Stuart-Smith

PART 2

YEAR IN REVIEW





2023/24 HIGHLIGHTS

OUR WORLD UNDERWATER SCHOLAR JOINS SURVEY EFFORT

In late 2023, RLS had the pleasure of welcoming OWUSS Scholar Sophie Kalkowski-Pope aboard a private surveying venture to learn the RLS methods. Sophie joined the crew travelling from Darwin to Port Hedland, completing 39 dives over the 3.5 week venture. Sophie found this to be an unforgettable part of her scholarship experience, and we look forward to having her along again in the future.

BIENNIAL LORD HOWE ISLAND SURVEYS

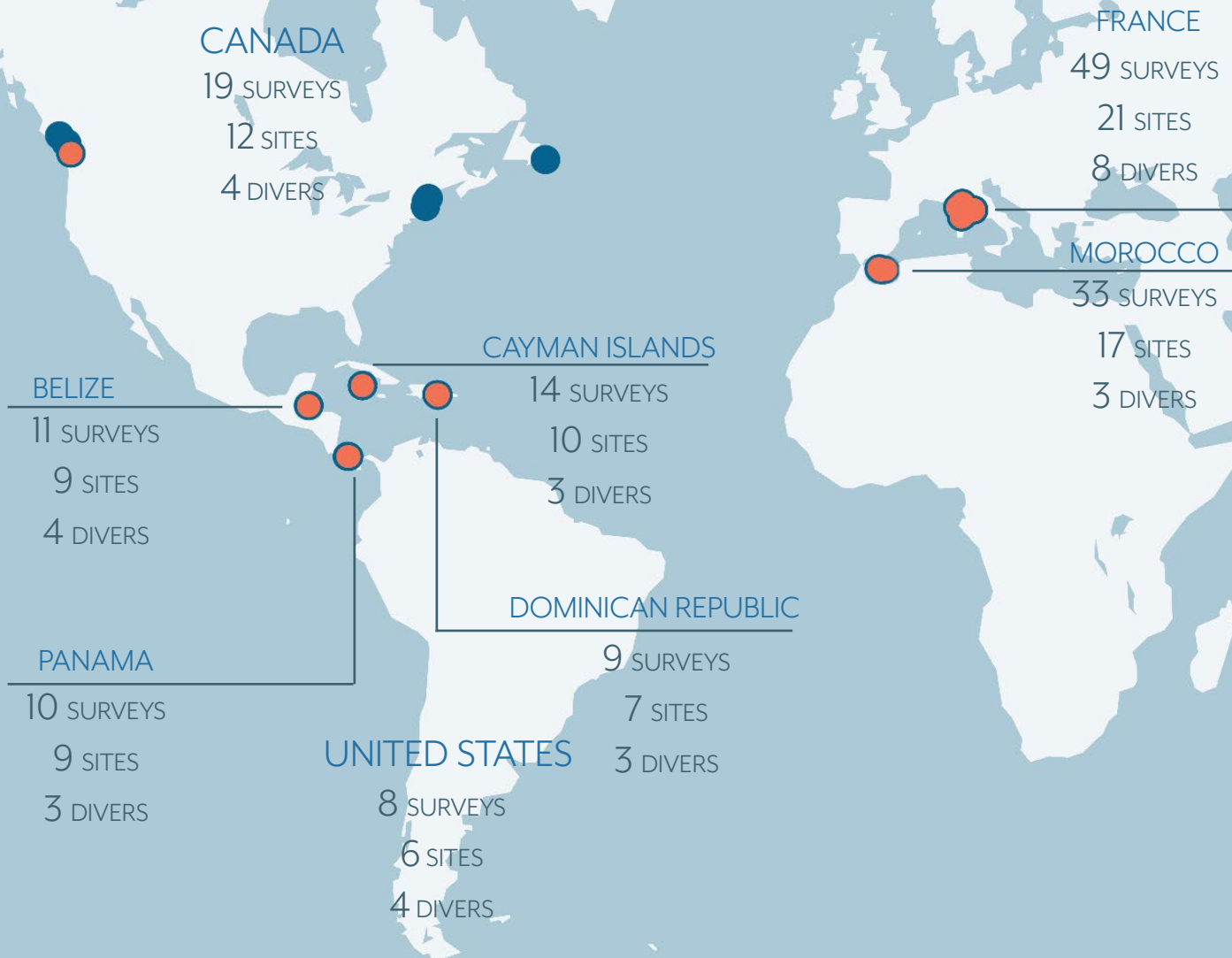
Reef Life Survey divers have been regularly collecting biodiversity data from the World Heritage Listed Lord Howe Island Group for over a decade, returning in 2024 to add 82 surveys from 32 sites to the ongoing timeseries data. Through the collaborative efforts of RLS, Lord Howe Island Marine Park teams, and local dive operators, 45 sites on LHI are able to be monitored every second year. These data enable RLS to report on the condition of Lord Howe's shallow reefs, and identify ongoing and emerging trends.

A GREAT YEAR FOR RESEARCH OUTPUTS

You can find a list of highlighted publications from the last financial year on Page 25.

With publications in some prestigious journals such as Nature Communications, this list includes research from members of Reef Life Survey's scientific team, as well as students and third party researchers utilising the Reef Life Survey data. It is always outstanding to see these data put to great use, and we recommend you give these papers a read!

2023-24 GLOBAL SURVEY



1397

SURVEYS
COMPLETED

507

● SITES RESURVEYED

216

● NEW SITES SURVEYED

EFFORT

ITALY
44 SURVEYS
21 SITES
3 DIVERS

SPAIN
24 SURVEYS
13 SITES
2 DIVERS

NEW CALEDONIA
4 SURVEYS
4 SITES
2 DIVERS

TONGA
86 SURVEYS
46 SITES
3 DIVERS
MINERVA REEF
17 SURVEYS
7 SITES
4 DIVERS

AUSTRALIA
883 SURVEYS
439 SITES
67 DIVERS

NEW ZEALAND
186 SURVEYS
102 SITES
9 DIVERS

Queensland
194 SURVEYS
105 SITES
18 DIVERS

New South Wales
190 SURVEYS
83 SITES
24 DIVERS

Victoria
19 SURVEYS
11 SITES
6 DIVERS

Northern Territory
17 SURVEYS
10 SITES
4 DIVERS

Tasmania
47 SURVEYS
25 SITES
9 DIVERS

South Australia
97 SURVEYS
39 SITES
9 DIVERS

Western Australia
337 SURVEYS
174 SITES
9 DIVERS

90

DIVERS INVOLVED

11,000

VOLUNTEER
HOURS

INCREASING REEF LIFE SURVEY'S DIGITAL PRESENCE

With Reef Life Survey's website usage and social media reach growing parallel to our global database, it's been an important focus of the RLSF to develop new and innovative ways to share data and news with our volunteer network and public audience.

IMPROVING DATA PRODUCTS

While some newly developed web tools such as species identification quizzes were purpose-built with RLS volunteers in mind, the Reef Species of the World platform boasts applications useful to all marine users. With custom fieldguides, offline accessibility through the RSoW web app, and a search by image function well established, the growing

functionality of the RSoW has coincided with a notable growth in web traffic in the last financial year. Reeflifesurvey.com received 52% more pageviews than the previous financial year, with equally notably growth in engagement across social media platforms. A huge thank you to web developers Yanir and Uri Seroussi for making this growth possible through their invaluable expertise and creativity.

PUBLISHING MORE

In the last financial year, Reef Life Survey's social media and communications team has committed to increasing social media coverage of survey news, new data products, and research outputs. Our ongoing goal in this space is to increase

public awareness of the work conducted by RLS, the products of that work, and the applications of those outputs.

Notably, content publications across Facebook and Instagram increased by >200%, coinciding with an overall increase in audience engagement and reach.

The most engaging posts throughout the year were:
1) RLS Tasmania training trip recap on Instagram Reels
2) Callouts for expressions of interest from new volunteer divers!

We'll keep the momentum going, so keep an eye out across our social media accounts for more!

WEBSITE INSIGHTS

110K

WEBSITE SESSIONS
(up 1%)

323.3K

WEBSITE PAGEVIEWS
(up 52%)

68K

WEBSITE USERS

SOCIAL MEDIA INSIGHTS (FACEBOOK AND INSTAGRAM)

239

CONTENT PUBLICATIONS
(up 223%)

2.2K

CONTENT INTERACTIONS

17K

AUDIENCE REACH

REVAMPING REEF LIFE SURVEY'S TRAINING REGIME

ESTABLISHING A TRAINING WORKING GROUP

In early 2023, a Strategic Planning Meeting identified refining Reef Life Survey's training processes as a key area for operational improvement. A Training Working Group was established with key aims to improve the engagement of newly trained volunteers, improve the quality of training, and better support volunteer trainers.

DEDICATED TRAINING COURSES

Throughout the last financial year RLS has trialled a return to a training model of dedicated courses rather than offering intermittent and opportunistic training. As a result, and following advertising and selection of trainees late in 2023, three dedicated training courses have been hosted in Tasmania, Batemans Bay, and South Australia, with additional courses following in New South Wales in late 2024.

This new training model has been well-received by both trainers and

trainees. We have welcomed 7 new volunteers to the Tasmanian team, 4 in Batemans Bay, and 3 in South Australia.

PRE-TRAINING QUIZZES

Pre-training species identification quizzes were developed in 2023 by web developers Yanir and Uri Seroussi, and in the last financial year have been incorporated into RLS's training regime as an essential pre-training exercise.

The team at RLS Headquarters are now working on developing pre-training methods and data entry training modules, aiming to better prepare prospective trainees prior to their training sessions, as well as to reduce the workload of trainers.

DATA VALIDATION TOOL

To further support trainers and database managers, our talented web developer Yanir has been behind the scenes working on a new data validation tool.

The new data sheet validator is a

mini app which runs a fine-toothed comb over volunteer data sheets, automating error checks prior to data submission to trainers, coordinators, or RLS HQ. With the implementation of this tool, we aim to reduce the amount of work required of trainers and coordinators when checking and merging data. Volunteer divers and trainees are required to run their datasheet through the validator at the end of each diving day or trip, enabling errors to be corrected independently.

THANK YOU

To our skilled and dedicated trainers, coordinators, web developers, and Training Working Group participants, thank you for making these positive changes possible. With more improvements to come, we hope to continue improving the training experience and quality of data for all.



14

TRAINEES CERTIFIED

3

DEDICATED TRAINING
SESSIONS

>150

SURVEYS COMPLETED

THE SCORSEBY SHEPHERD AWARDS

For outstanding voluntary contributions to
the Reef Life Survey Foundation





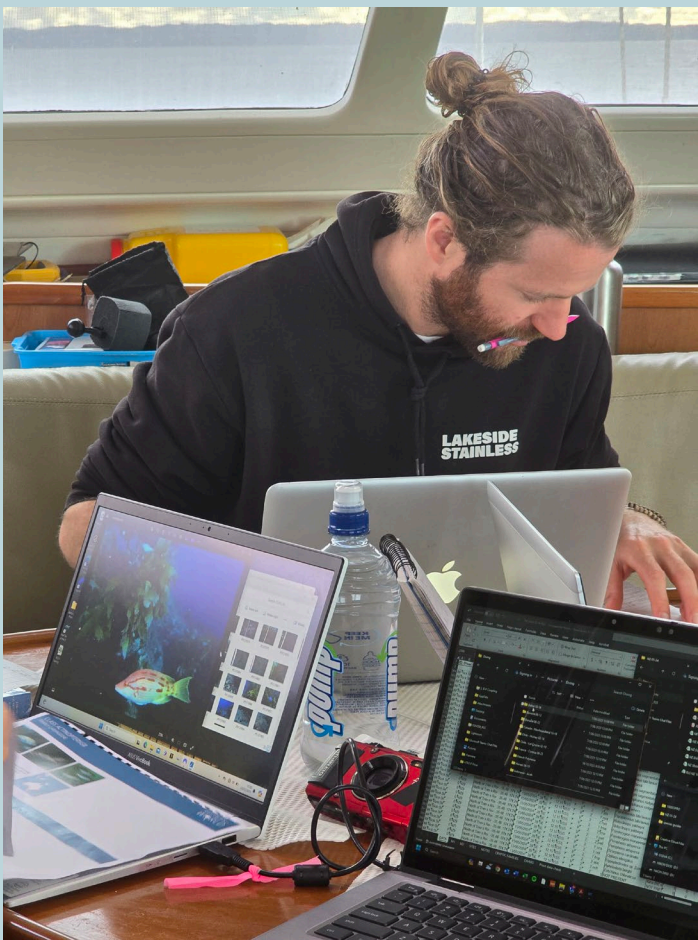
THE SURVEY PRIZE

For the RLS member who contributed to the greatest number of surveys during the year

José Antonio Sanabria Fernández

This year's Survey Prize goes to RLS Europe trainer and coordinator José, who contributed 68 surveys in total throughout the year.

Honourable mentions go to Samantha Crisp, also having contributed extraordinary survey efforts.



THE DISTINGUISHED CONTRIBUTION AWARD

For the RLS member who made the greatest voluntary contribution during the year by means other than surveys

Joe Shields

This year's Distinguished Contribution Award goes to Joe Shields, for helping to facilitate an enormous independent survey effort throughout New Zealand and South Pacific Islands aboard the private catamaran Melita. Between himself and his crew, this venture has enabled hundreds of surveys to be added to the global database.

Honourable mentions go to Meryl Larkin and Tess Hoinville, both elevating their responsibilities to become RLS Trainers in early 2024.

OUTCOMES

PART 3



40

REPORTS & PUBLICATIONS
PRODUCED

MANAGEMENT & SCIENTIFIC OUTPUTS HIGHLIGHTS

[Marine Protected Areas Promote Stability of Reef Fish Communities Under Climate Warming](#)
Benedetti-Cecchi, L., Bates, A.E., et al. 2024
Nature Communications, vol. 15: 1822

[Sustainable Reference Points for Multispecies Coral Reef Fisheries](#)
Zamborain-Mason, J., Cinner, J.E., et al. 2023
Nature Communications, vol. 12: 5368

[Entry Fees Enhance Marine Protected Area Management and Outcomes](#)
Brown, C., Ahmadi, G.N., et al. 2023
Biological Conservation, vol. 283: 110105

[Rarity Mediates Species-specific Responses of Tropical Reef Fishes to Protection](#)
Sanchez, L., Loiseau, N., et al. 2024
Ecology Letters, vol. 27.

[Population Parameters and Conservation Implications for One of The World's Rarest Marine Fishes, the Red Handfish \(*Thymichthys politus*\)](#)
Bessell, T.J., Stuart-Smith, R.D., et al. 2023
Journal of Fish Biology, vol. 104, pp. 1122-1135.

[Changes in sea floor productivity are crucial to understanding the impact of climate change in temperate coastal ecosystems according to a new size-based model](#)
Audzijonyte, A., Delius, G.W., et al. 2023
PLoS Biology.

[Mean reef fish body size decreases towards warmer waters](#)
Coghlan, A.R., Blanchard, J.L., et al. 2023
Ecology Letters, vol. 27.

[Forty Years of No-Take Protection Preserves Local Fish Diversity in a Small Urban Marine Protected Area](#)
Davis, T.R., & Harasti, D. 2023
MDPI, vol. 3, pp. 401-413.

[Unveiling Functional Linkages Between Habitats and Organisms: Macroalgal Habitats as Influential Factors of Fish Functional Traits](#)
Sanabria-Fernández, J.A., Génin A., & Dakos, V. 2024
Marine Environmental Research, vol. 194.

FINANCIALS STATEMENTS

PART 4



An underwater photograph of a coral reef. The water is clear blue, and sunlight filters down from the surface, creating a shimmering effect. Numerous fish of various species are swimming throughout the scene. In the foreground, there is a large, vibrant pink coral structure. The background shows a rocky reef structure with more diverse coral and fish.

FINANCIAL SUPPORT

Reef Life Survey would like to thank the following people for their financial support over the 2023/24 financial year.

COLLEEN MORRIS

Colleen has provided enormous voluntary support & much appreciated expertise to the financial record-keeping of the RLSF.

MICHAEL MULLER ACCOUNTING

Michael Muller and his staff, in particular Deanne, have generously supported the RLSF in the last financial year. Michael has continually supported the RLSF since the organisation's incorporation in 2011. RLSF sincerely thank Michael and staff for their invaluable accounting advice & quality auditing.



FINANCIAL REPORT

RLS INCORPORATED

The RLSF Incorporated account spends & receives grant funding and other income.

Budget Category	Subcategory	Amount
Income	Grants	\$186,236
	Donations	\$5
	IPF Expenses Reimbursed by MPF Account	\$80,000
Total Income		\$271,241

	Subcategory	Amount
Expenditure	Website and Communications	\$1,410
	Field Expenses	\$32,547
	Insurance	\$3,449
	Materials and Supplies	\$1,674
	Professional Services	\$4,554
	Safety Equipment	\$255
	Travel	\$8,586
	Yacht Running Costs	\$6,802
	Accounts and Audit	\$1,730
	Bank, Tax and Gov Fees	\$469
	Postage	\$277
Total Expenses		\$61,753
Net Income		\$209,488



MARINE PUBLIC FUND

The Marine Public Fund is the account through which donations to the RLSF are spent & received.

Budget Category	Subcategory	Amount
Income	Memberships	\$1,010
	Merchandise Sales	\$33
	Donations	\$5,204
Total Income		\$6,247
	Subcategory	Amount
Expenditure	Field Expenses	\$4,709
	Bank Fees	\$48
Total Expenses		\$4,757
Net Income		\$1,490

REIMBURSEMENT OF IPF EXPENSES

An \$80,000 transfer from the Marine Public Fund (MPF) account to the RLS Inc account was a residual transaction to reflect payments made on the Ian Potter Foundation Grant from 2019. Grants funds came to the MPF Account and funds were spent, in full accordance with the grant, from the operational (RLS Inc) account. This transfer was recommended by the auditor for transparency, and supported by the RLSF Board.

BALANCE SHEET

RLS INCORPORATED

	Subcategory	Amount
Assets	Foundation Account	\$320,958
	Petty Cash	\$29
	Equipment	\$32,237
	Trade Debtors	\$12,000
Total Assets		\$366,424

	Subcategory	Amount
Liabilities	GST Liabilities	\$24,170
	Trade Creditors	\$1,845
Total Liabilities		\$24,170
Net Assets		\$342,254

	Subcategory	Amount
Equity	Retained Earnings	\$167,364
	Current Earnings	\$174,890
Total Equity		\$342,254



MARINE PUBLIC FUND

	Subcategory	Amount
Assets	Marine Public Fund	\$5,354
	Paypal Account (AUD)	\$11,007
	Paypal Account (USD)	\$37
	Dinghy	\$32,000
Total Assets		\$48,398

	Subcategory	Amount
Liabilities	GST Liabilities	-\$24,528
Total Liabilities		-\$24,528
Net Assets		\$72,926

	Subcategory	Amount
Equity	Retained Earnings	\$151,435
	Current Earnings	-\$78,509
Total Equity		\$72,926

PART 5

THANKYOU







PARTNERS &

Aquenal Pty. Ltd.

Australian Ocean Data Network (AODN)

Bigelow Laboratory for Ocean Sciences, USA

Department for Environment & Water, SA

Department of Biodiversity, Conservation & Attractions, WA

Handfish Conservation Project

Institute for Marine & Antarctic Studies (IMAS)

Integrated Marine Observing System (IMOS)

Minderoo Foundation

Montpellier University, France

Nord University, Norway

NSW Department of Primary Industries

Parks Australia

Parks Victoria

Port Phillip Bay Fund, Department of Environment, Land,

Rottneest Island Authority (RIA)

Smithsonian Marine Global Earth Observatory (MarineGEO)

Smithsonian Institute, USA

South African Institute for Aquatic Biodiversity (SAIAB)

The Ian Potter Foundation

University de Las Palmas de Gran Canaria, Spain

University of Maryland, USA

University of Tasmania, Australia

University of Victoria, Canada

Water & Planning, VIC



& SUPPORTERS

Amanda Bates, UVIC, Canada
Anthony Bernard, SAIAB
Antonia Cooper, RLS/IMAS
Combined Hunter Underwater Group
Colleen Morris
Dane Jones
David Foster
David Mouillot, University of Montpellier
Derek Shields
Deakin University
Dive Lord Howe
Em Lim, Canada
Emmett Duffy, MarineGEO, Smithsonian Institute, USA
Ella Clausius, RLS/IMAS
Environment Protection Authority, SA
Friends of Beware Reef
Glider Global
Green Adelaide
Jasmin Schuster, UVIC, Canada
Jemina Stuart-Smith, Handfish Conservation Project/ IMAS
John Anderson, Forte Web Design
Jon Lefcheck, University of Maryland, USA
Jose Sanabria Fernandez, Spain

Justin Hulls, IMAS
Kaylee Smit, SAIAB
Leah Harper, MarineGEO, USA
Lisandro Benedetti-Cecchi, University of Pisa, Italy
Lord Howe Island Marine Park
Mark Costello, Nord University, Norway
Matt McLean, University of North Carolina, USA
Michael Muller
Mikel Becerro, PNA-CSIC, Spain
Natali Lazzari, Spain
Nature Coast Marine Group
Nestor Bosch, University of Las Palmas de Gran Canaria
Paul Day, Carijoa Consulting
Sarah Gracie, UTAS
Solitary Islands Underwater Research Group
Tasmanian Divers Group
Tomas Bird, Canada
Underwater Explorers Club of Western Australia
Underwater Research Group of New South Wales
Underwater Sports Diving Centre
Uri Seroussi
Western Australian Divers for Diversity Inc.
Whitsunday Escape



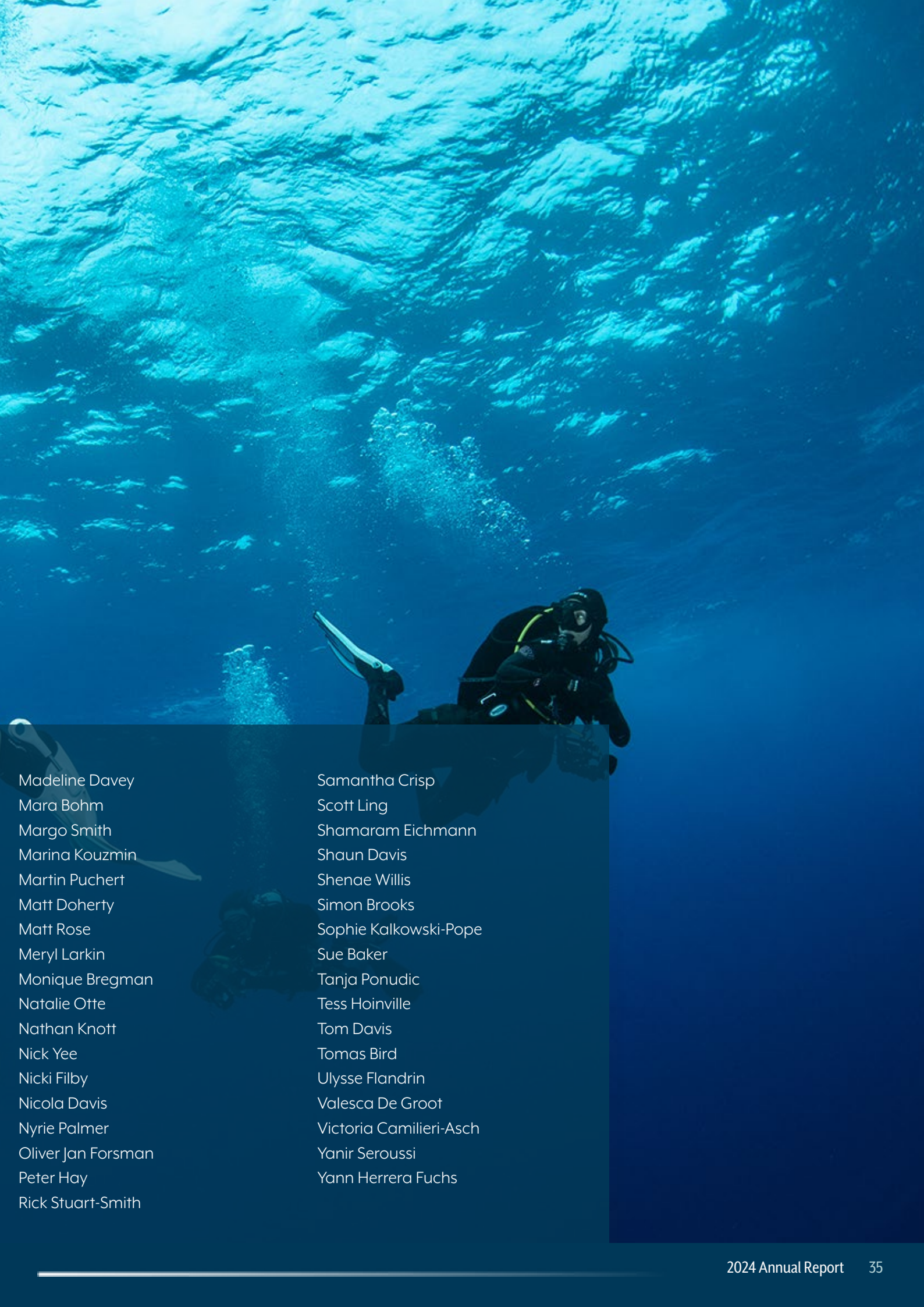
VOLUNTEERS

Thank you to the following people for contributing data to the RLS database over the 2023/24 financial year:

Alberto Moreno Mejias
Alexandra Lea
Andrew Green
Angel Orozco Rodriguez
Anna Edgar
Antonia Cooper
Ashley Smith
Aviaja Bruce Nathansen
Beau Masters
Bill Barker
Carolina Garcia
Caroline Mason
Cass Nolan
Caterina Mintrone
Cathie Shorthouse
Cayne Layton
Cesc Gordo-Vilaseca
Chris Westley

Claire Butler
Craig Smith
Cyril Hautecoeur
Danny Brock
Deb Marguerite
Emily Anderson
Erick Lopez
Felicia Aronson
Fiona McQueen
Flora Jennifer
Gabriella Scata
Gary Summers
German Soler
Giulia Proserpio
Graham Edgar
Holly Baird
Iacopo Bertocci
Iona Flett

Jamie Hicks
Jasmin Schuster
Joe Shields
John Turnbull
Jonathan Mitchell
Jose Antonio Sanabria Fernandez
Josh Moloney
Joshua Batchelor
Karen Hoffman
Kate Tinson
Kevin Smith
Kirsty Whitman
Kris O'Keeffe
Lara Denis-Roy
Leah Harper
Lisandro Benedetti-Cecchi
Liz Oh
Louise de Beuzeville



Madeline Davey
Mara Bohm
Margo Smith
Marina Kouzmin
Martin Puchert
Matt Doherty
Matt Rose
Meryl Larkin
Monique Bregman
Natalie Otte
Nathan Knott
Nick Yee
Nicki Filby
Nicola Davis
Nyrie Palmer
Oliver Jan Forsman
Peter Hay
Rick Stuart-Smith

Samantha Crisp
Scott Ling
Shamaram Eichmann
Shaun Davis
Shenae Willis
Simon Brooks
Sophie Kalkowski-Pope
Sue Baker
Tanja Ponudic
Tess Hoinville
Tom Davis
Tomas Bird
Ulysse Flandrin
Valesca De Groot
Victoria Camilieri-Asch
Yanir Seroussi
Yann Herrera Fuchs

