



SULAWESI KEEPERS

Annual Report 2022



Year 2022

First full year of operation

Dear friends of **Sulawesi Keepers**, dear aquarists, conservationists, researchers, students, nature lovers... We present to you the annual report for 2022 - the year **we launched our website and went public** with the idea of coming together and not letting our beloved fish and invertebrates go extinct.

We are pleased that the initiative to protect the freshwater endemic fauna of the island of Sulawesi met with such a response. We have established many **partnerships**, met new people and opened up to their suggestions. As a result, a wide field of **activities** has opened up in front of us that we would like to engage in - and should engage in if we want to fight with high commitment to save species.

It has been a very busy year. The results of many activities will show later, but the report presented proves that we take our mission seriously.

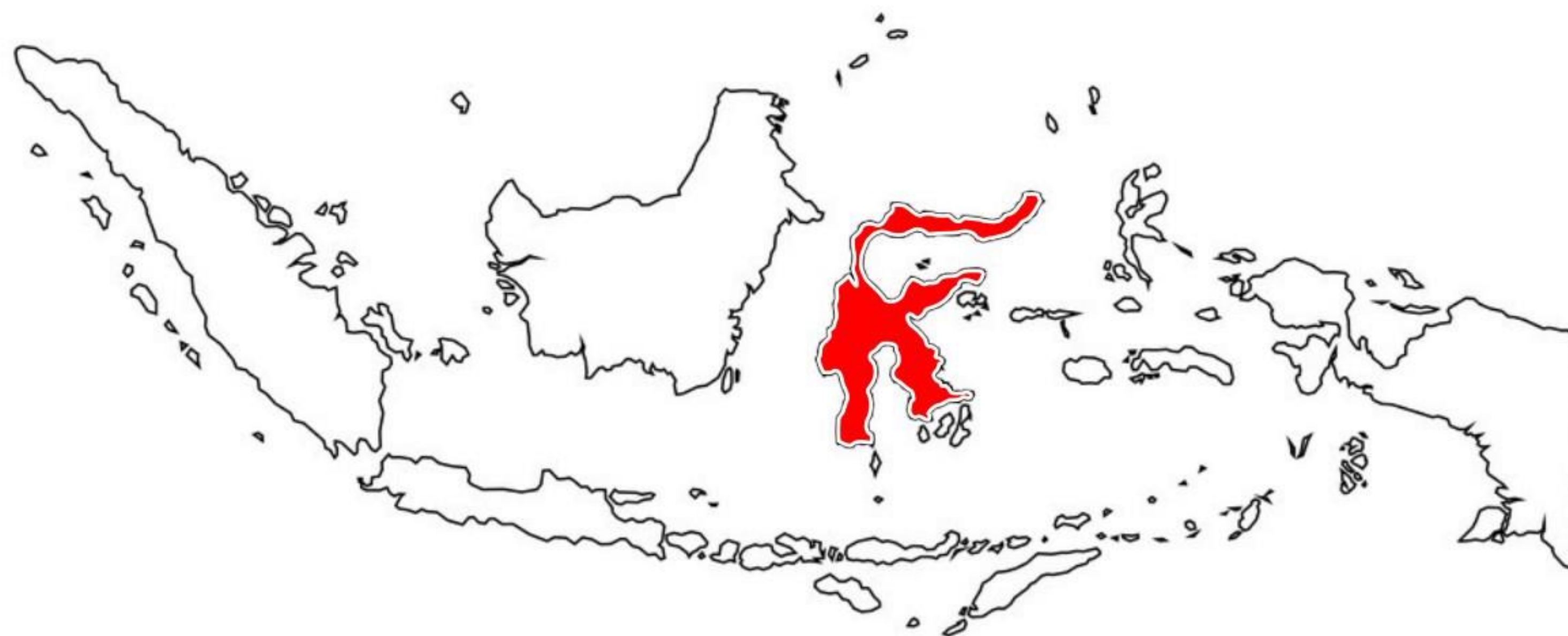
We connect aquarists, scientists, conservation organisations, and local communities in an effort to **prevent extinction**.



Markéta Rejlková, President and founder of Sulawesi Keepers, z. s.

Why Sulawesi Keepers?

The lakes and rivers of Sulawesi, an Indonesian tropical island, are famous for the diversity of shrimps, snails, crabs, and fish. But these unique freshwater habitats are threatened by the continuous spread of exotic species, and we fear that some of the small invertebrates are probably already **extinct**.



Can you imagine that these fascinating animals **disappear** from our planet? It's time to act, urgently.



Our team

The trio of founding members grew by two reinforcements



Mgr. Markéta Rejlková

Aquarist and curator of fish, reptiles, amphibians and invertebrates in the Ostrava Zoo, Czech Republic.



doc. Ing. Jiří Patoka, Ph.D., DiS.

Associate Professor at the Department of Zoology and Fisheries of the Czech University of Life Sciences in Prague.



Ing. Jiří Libus

Aquarist, scout and employee of the Mendel University in Brno, Czech Republic.



Surya Gentha Akmal, M.Sc.

Currently pursuing a PhD in Applied Zoology at the Czech University of Life Sciences in Prague, has interest in freshwater invasive alien species and their impact on native biota in Indonesia; fisheries biology; coastal and marine resource management; and disaster management.



Ing. Mgr. Kateřina Schrimpelová, Ph.D.

Freelance consultant in water chemistry and technology. A former aquarist who devotes much of her life to water. A graduate of civil engineering with a focus on water management, specializing in water chemistry.

On Friday, June 17, 2022, all Sulawesi Keepers members held a meeting in Prague to discuss future plans. The highlight was a visit to the **Ambassador Extraordinary and Plenipotentiary of the Republic of Indonesia to the Czech Republic, Her Excellency Mrs. Kenssy Dwi Ekaningsih**. At the informal meeting, we discussed about Sulawesi, explained our future plans and the **importance of working together with Indonesian partners** to protect freshwater habitats. The discussion continued at the dining table for dinner, and we were served typical Indonesian food. As Mrs. Ambassador said, we were in "little Indonesia" for this evening, and it was an unforgettable and pleasant experience for us.



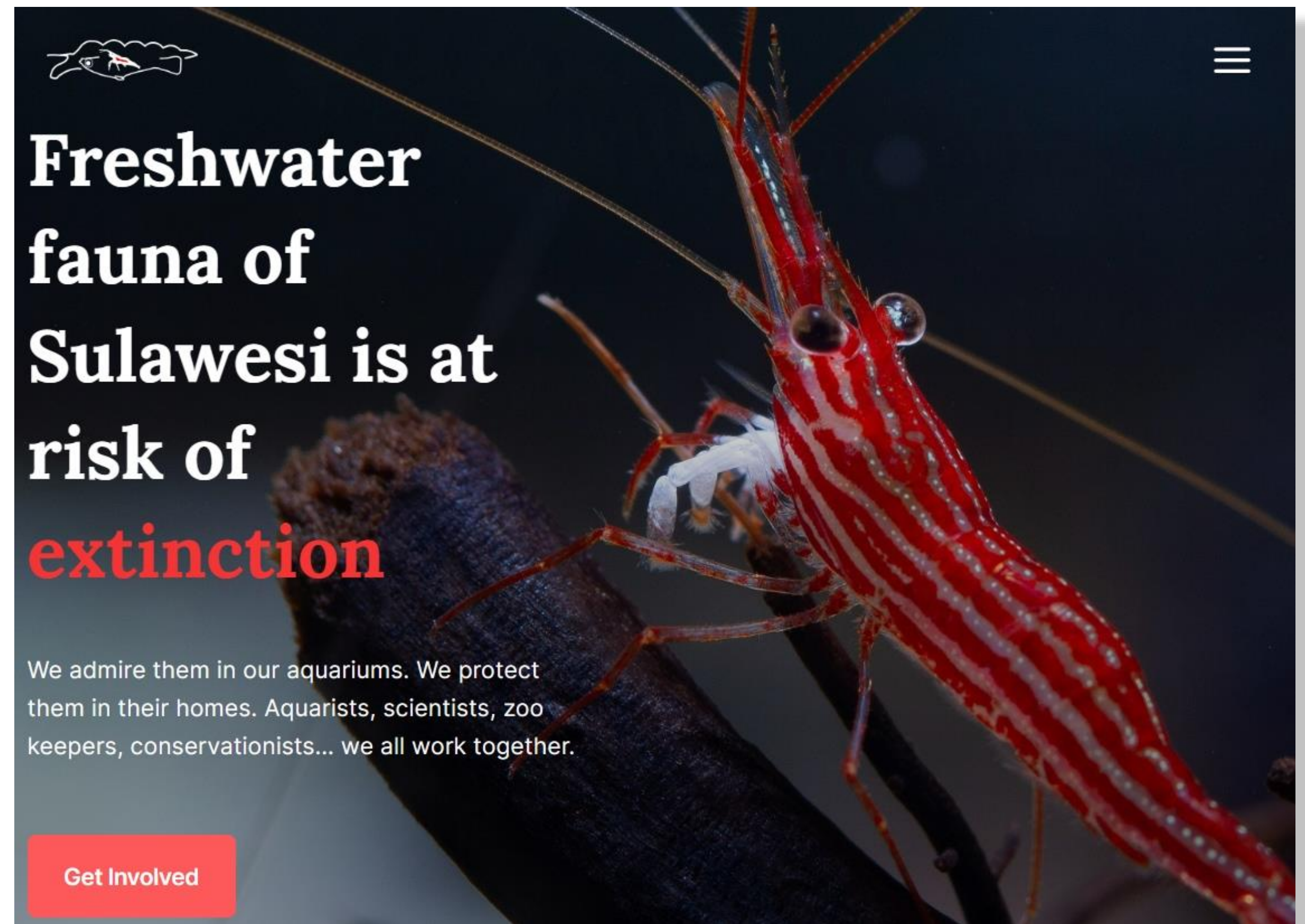
Our website

Dissemination of information about the state of the Sulawesi lakes, but also the support of mutual sharing of experiences of aquarists and education of wider audience, are our important goals.

We have built a web presentation of the cornerstones of our project. We also often publish other materials, whether they are short updates or articles focused on a specific topic.

We published 23 blog posts in 2022.

We translate all materials in **four languages**: English, German, Czech and Indonesian.



Many of our materials are intended for aquarists, especially (aspiring) **shrimp breeders**:

- We listed 14 critically endangered shrimp species clearly by individual lake.
- We summarized the biggest obstacles in successful keeping or breeding.
- We published a 4-part series of articles about how Ostrava Zoo started breeding Sulawesi shrimps.



But Sulawesi is not just shrimp. There are also **snails**, **crabs** and of course **fish**:

- We presented the alarming story of *Oryzias eversi*. This fish has an interesting reproductive strategy. So far, only one location of its occurrence is known, and there it faces pollution, non-native fish and diseases. It is on the verge of extinction in the wild!
- We have published a comprehensive list of all the freshwater endemic fish of Sulawesi, including their conservation status and comments on keeping them in aquariums.
- We also devoted a similar comprehensive overview to snails - and you will be surprised at how many different species inhabit rivers and lakes of Sulawesi!



We also inform about purely **Indonesian topics** that are not directly related to the aquarium hobby:

- We were honored to interview Dr. Daisy Wowor, Indonesia's leading crustacean expert. Daisy told us, for example, what is most threatening to crustaceans nowadays and how these animals are perceived by Indonesians.
 - Sulawesi is often affected by earthquakes or floods. We analyzed the impact this may have on freshwater biota.
- We reported on the spread of the invasive crayfish *Cherax quadricarinatus*, the occurrence of which has already been confirmed on Sulawesi.



Sulawesi Keepers Global Survey

We just didn't bring the information. We also asked for it - we collected data on Sulawesi fish, snail, shrimp and crab keepers. This global survey was launched on 28. 3. 2022 and was not evaluated in 2022, we continued to collect the data for at least one year. We expect to get an overview of the world population of various endangered species in aquariums.



Prigen Conservation Breeding Ark support

Prigen Conservation Breeding Ark (PCBA) is our partner located in Java. PCBA works mainly with Indonesian birds and mammals, but is also very successful in breeding many endangered blackwater fish. PCBA announced their plan to build a large breeding facility for freshwater endemics of Sulawesi. **Conservation breeding** of these endangered species is very much needed, and it makes sense to have such facility directly in Indonesia. We supported this effort and provided a **material help**.

Sulawesi Keepers packed 4 buckets of mineral salt (over 12kg total weight) and sent them to PCBA. We are ready to ship more materials in the future and also collect them from individual donors.

The first batch of mineral salts was generously donated by Garnelenhaus.



Speaking of Garnelenhaus, its owners, brothers **Frank and Carsten Logemann**, visited Sulawesi in 2008 and 2011. We interviewed them for our blog about this experience and their relationship with (Sulawesi) shrimps. The journey to the Malili Lakes and Poso Lake looks very adventurous in their narrative, but who wouldn't get a wanderlust after reading this!



Sulawesi is so
breathhtakingly beautiful
– a freshwater aquarist
could never have wished
for better.

Carsten Logemann

Expedition Sulawesi 2022

In September 2022, our president Markéta Rejlková went to Sulawesi for the very first time. Her goal was to collect information about the current state of aquatic biotopes, establish closer relations with our local partners, observe well-known species in their natural environment, bring home a lot of photos and videos and, of course, see the beauty with her own eyes. She succeeded!

Great companions on the trip were aquarists Martin Hauskrecht (Slovakia) and Christian Reusch (Germany). Diky Dwiyanto (freshwater shrimp expert from Tadulako University, Palu, Sulawesi and also a member of the conservation NGO Celebica) joined the team for the most of the trip, Kurniawan P. Bandjolu (Mosintuwu Institut) was our guide in the Poso area. Driver Reza was an indispensable addition to the group. In the Malili Lakes area, Aspar and his friends Agus, Adit and Kadir were our excellent local guides.

All the expenses of the trip, including our guests, were paid equally by Markéta, Martin and Christian as private individuals, i.e. not using the budget of Sulawesi Keepers.



The expedition brought many wonderful experiences and observations. We were rocked by the waves in the warm, oxygenated lakes. We found a variety of shrimps, even *Caridina dennerli*, which is on the verge of extinction in the wild. We observed several species of crabs walking majestically along the bottom of the lakes. We counted thousands of snails, dozens of species... We saw endemic plants. And the rapid courtship of sailfin silversides (*Telmatherina* spp.) And large flocks of ricefish fry. And pelagic shrimps... and so on.



But of course we also saw scenes that confirmed the fears that gave birth to Sulawesi Keepers. Enemy number one is **Flowerhorn** - it's hard to talk like that about a fish, a living creature. But this fish was created by man (it is a hybrid of Central American cichlids) and does not belong to Sulawesi. Ancient lakes with dozens of endemic species have never been inhabited by such large, predatory and very well-reproducing fish. Where the Flowerhorns are well established, we can find shrimp just under the rocks. Slow endemic gobies do not have the chance to hunt or reproduce. All the smaller species of snails and the young of the large ones are eaten.

The problem is also water **pollution**, ubiquitous garbage, **algae** growing in previously very clean water.

But we're not going to passively watch... that's why Sulawesi Keepers exist.



Partnerships in the aquarium sector

In autumn 2022, we acquired two important partners. First of them is **Arbeitskreis Wirbellose in Binnengewässern e.V.** (AKWB, Working Group for Invertebrates in Inland Waters). AKWB is an association whose goal is to promote the care and breeding of invertebrates in inland waters and to increase and spread knowledge about these animals. The 350 members of the AKWB have extensive experience in shrimp breeding, so we hope for professional help. We received a donation from them during our attendance at their annual meeting, an amazing 1000 EUR!



The second important partner is the German **Dähne Verlag**, which publishes the popular magazines **caridina** and **aquaristik**. Both magazines will regularly inform about Sulawesi and our activities.



Talking about our cause

In addition to the publishing activity on our own website, we talked about the alarming state of the Sulawesi lakes and the threatened dozens of endemic species at several meetings:

- Meeting of fish keepers and curators of the Union of Czech and Slovak Zoos, 26.-27.4.2022, Ostrava, Czech Republic
 - Meeting of invertebrate keepers of the Union of Czech and Slovak Zoos, 4.-5.5.2022, Plzeň, Czech Republic
 - Tagung zur Arterhaltung im Aquarium (Conference on species conservation in aquariums), 27.-28.8.2022, Thannhausen, Germany
- The annual conference of the European Association of Zoos and Aquaria, 27.9.-1.10.2022, Algarve, Portugal (poster)
- The annual meeting of the Arbeitskreis Wirbellose in Binnengewässern e.V. (Working Group for Invertebrates in Inland Waters), 8.-9.10.2022, Lehrte, Germany

Very special event was the webinar "Exploring Freshwater Biodiversity" which was held in collaboration with the Department of Biology, Faculty of Mathematics and Natural Sciences (FMIPA), Hasanuddin University (UNHAS), Makassar, Sulawesi and Sulawesi Keepers on 21.-22.11.2022 online. Three members of Sulawesi Keepers gave a lecture there. The webinar was attended by more than 100 participants. We hope that this event marks a beginning of our cooperation.

"Exploring Freshwater Biodiversity"

Day 1

- Dr. Magdalena Litaay, M.Sc.**
Opening Remarks
• Head of Biology Department, Hasanuddin University
- doc. Ing. Jiří Patoka, Ph.D., DiS.**
Freshwater invaders: case studies from Indonesia
• Sulawesi Keepers
• Department of Zoology and Fisheries, Czech University of Life Sciences Prague, Czech Republic
- Surya Genta Akmal, M.Sc. PhD Cand**
Biological invasions: why Sulawesi needs to be vigilant?
• Sulawesi Keepers
• Department of Zoology and Fisheries, Czech University of Life Sciences Prague, Czech Republic
• Centre for Coastal and Marine Resources Studies, The Institute for Research and Community Service, IPB University, Bogor, Indonesia

Day 2

- Mgr. Markéta Rejlková**
Let's go underwater: there is no other place in the world like Sulawesi
• Sulawesi Keepers
• Ostrava Zoo, Czech Republic
- Muhammad Iqam, M.Sc**
Moderator
• Biology Department, Hasanuddin University

Day 1: 22 November 2022
Day 2: 23 November 2022
16.00 - 17.30 (WITA)/ 9.00 - 10.30 (CET)
Meeting ID: 547 640 0170
Passcode: 023820

JOIN US TO SAVE SULAWESI'S FRESHWATER BIODIVERSITY !!!

REGISTER HERE !
<https://bit.ly/3XaQh1P>

Our finance and assets

BANK ACCOUNT

Our bank account is transparent – see it [here](#). IBAN: CZ58 2010 0000 0022 0204 1053 - BIC/SWIFT: FIOBCZPPXXX.

We have started the year 2022 with balance of 25,100 CZK and ended with 45,375.87 CZK.

PAYPAL ACCOUNT

Paypal account donations@sulawesikeepers.org is registered by Sulawesi Keepers, z. s., and used to receive donations which were later transferred to the bank account above.

We have started the year 2022 with balance of 0 CZK and ended with 19,27 EUR (equals to 464.70 CZK).

CASH REGISTER

Cash was withdrawn from the bank account (10,000 CZK) during the year and used to cover expenses. One international donation was received in cash (1,000 EUR).

We have started the year 2022 with balance of 0 CZK and ended with 5,600 CZK + 1,000 EUR (equals to 24,115 CZK).

EXPENSES IN 2022

The expenses were related to services (web hosting and domain – 1,331.73 CZK; postage fees – sending mineral salt to Indonesia, sending water samples to Austria – 4,787.20 CZK) and materials (buying mineral salt for testing – 1,909.80 CZK).

DONATIONS

We received one financial gift to our bank account in the amount of CZK 25,000 which was based on a donation agreement signed on 26.7.2022 by the donor LENGAU, s.r.o. The purpose of the donation was to support our activities.

We have received one donation in cash (1,000 EUR) from Arbeitskreis Wirbellose in Binnengewässern e.V.

Furthermore, we have received donations through the PayPal account from individual donors. The total amount of these donations was 4,000 CZK and 225.62 EUR (excluding the PayPal fees). There were a total of nine individual donors, but some of them wished to remain anonymous or did not give us their consent to publish their names. But we like to name some of our great donors (in chronological order): Lenka Šikulová (9.46 EUR), Branislav Barčin (1,000 CZK), Martin Hauskrecht (3,000 CZK), Gerd Bartz (10 EUR), Kai Gerike (100 EUR). Thank you!

BALANCE

As of December 31, 2021: 25,100 CZK.

As of December 31, 2022: 75,555.57 CZK (50,975.87 CZK and 1,019.27 EUR).

Thank you

Our partners and donors

We are sincerely grateful to everyone who helps us financially, professionally or gives us motivation and confirms that our work has meaning. It is a commitment for us and **we will do our best not to disappoint the hopes you place in our efforts to save the species richness of the Sulawesi lakes.**

Many people **give their time** - the most valuable thing they have. They are mainly **members of Sulawesi Keepers**, authors of articles, but also translators. We want to name **Adyah Ningtyas** and **Ulli Bauer** for these "invisibles", whose name does not appear on the blog, but who help us reach more people. Both contributed to better communication in Indonesian and German in 2022.

We couldn't do without the professional help, opinions and advice of **experts** we value: **Hans-Georg Evers, Fabian Herder, Werner Klotz, Jan Möhring, Thomas von Rintelen, Andreas Wagnitz** and many others who have given us a consultation here and there.

Ostrava Zoo from the Czech Republic is a partner that helps us reach out to other zoos, but also travel to various meetings and spread awareness about Sulawesi Keepers. It also allows us to experience breeding challenges firsthand.

LENGAU, s.r.o. supports us financially. There are other big partners who have put their trust in us and want to cooperate. They help us reach more people and raise awareness of Sulawesi's issues in the **conservation community**.



LIB Leibniz Institute for the Analysis of Biodiversity Change



However, we receive the greatest support from the **aquarium community**. Fish keepers, shrimp breeders and other enthusiasts give us trust, finances, but above all their interest. We sincerely thank them and we will continue to work hard to delivery results. **Lenka Šikulová, Branislav Barčín, Gerd Bartz, Kai Gerike and Martin Hauskrecht** sent us a financial donation. The latter deserves special thanks as he and **Christian Reusch** have invested their money, time and hard work in the Sulawesi 2022 expedition.

We thank **AKWB** for not hesitating to support us and become our important partner. We are no less grateful to **Dähne Verlag**, which regularly reports on Sulawesi and our activities in its magazines.

Last but not least, we would not be able to reach so many potential supporters without showing the beauty and uniqueness of Sulawesi fish and invertebrates. We are grateful to the **photographers** who provided their photos free of charge: **Hans-Georg Evers, Jana Fury, Werner Klotz, Frank Logemann, Chris Lukhaup, Jiří Patoka, Markéta Rejlková, Thomas von Rintelen, Julia Schwarzer, Daisy Wowor, Demin Wong.**

Thank you!

What's next?

Plans for 2023

We had to accept that our sources (especially time) are limited and we cannot perform miracles. Not immediately and not in all areas at once. But we want to make progress in all **key areas**:

- We will continue to build relationships with **local partners**. This is crucial for the future of the Sulawesi lakes. We want to work not only on monitoring and conservation actions taking place in the field (*in situ*) or around the aquariums (*ex situ*), but also support **education** towards better understanding of underwater worlds.
- We will bring new information from the **monitoring** of natural populations.
- Our **publication** activity will be even more intensive.
- We will contribute to the **knowledge of Sulawesi species**, including their aquarium husbandry.
- We will help breeders of endangered species to connect with each other and create a **network for conservation breeding**.





SULAWESI KEEPERS

Underwater. Under threat. Under **your** protection.



sulawesikeepers.org



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facebook.com/SulawesiKeepers