

4th International L-number Days: 29 Oct–02 Nov 2015

By Mark Walters

Hanover, 30th Oct. - 1st Nov. 2015
**4. INTERNATIONAL
L-NUMBER-DAYS**

Unique schedule of talks with
lots of well-known speakers:

Christian Cramer
Hans-Georg Evers
Matthias Kählig
Walter Lechner
Nathan Lujan
Ingo Seidel
Leandro Sousa
Andreas Tanke
and many more ...

All talks are given in English and German

Registration and agenda: www.l-number-days.eu



I had looked on in awe at previous conventions held in Germany discussing my favourite group of fish, but had always considered it to be out of reach geographically and from a financial perspective! Host Andreas Tanke had piled on the pressure, along with numerous European fishkeeping friends who had come to the CSG Convention year after year. I felt almost embarrassed to refuse the hospitality they offered and when my wife supported my obvious yearning to go I started to make arrangements. I found the whole package of arranging plane tickets, hotel accommodation and convention tickets to be surprisingly affordable, although waiting to book my flights three weeks before the event meant I probably didn't get the best deals available!

I bumped into a posse of five UK-based catfish enthusiasts at the airport in Hanover. We reached the convention centre on the Thursday night and got stuck into serious catfish discussions with the organisers and delegates

who couldn't wait for the official opening on Friday evening!

Panta Rhei Aquarium

Andreas and his team had thought about those arriving early and arranged a meeting on the Friday at Panta Rhei, a local aquarium store that rivals many public aquaria with beautiful biotope sales tanks. The thing that really gets the Panta Rhei staff excited though is flow dynamics and attempting to create the perfect flow environment for aquarium fish. Hence the numerous aquaria dedicated to different flow scenarios using a variety of internal and external pumps and filters.

Suffice it to say, the fish on offer were exceptional quality including many rare Loricariidae and other unusual catfish. The team at Panta Rhei were very happy to provide information, knowing the catch locations of most of the fish on offer. The owner of Panta Rhei, Matthias Kahlig, presented his research as

the last talk at the convention and gave us plenty of ideas for our own aquaria.

Friday night

Back at the convention, 170 delegates were booking in, receiving their convention packs and donning their L-Welse 2015 T-shirts. Colour coded for speakers, facilitators, interpreters and of course our masters of ceremony, Andi and Ingo Seidel, in special red shirts. They made great hosts entertaining us with their banter and slick presentation skills! Themes for the weekend were exactly the mix I hoped for, and I'm sure other delegates felt the same way. Specialist talks on wood-eaters (*Panaque* group), *Hypancistrus*, *Pseudacanthicus*, Rio Orinoco species, Peruvian species, Brazilian river systems, large- and small-scale aquaculture and breeding reports on some very desirable L numbers. All talks were presented in German and English, with Andi, Ingo, Hans-Georg Evers and Daniel Konn Vetterlein provided the translations and some of the most entertaining moments of the weekend!

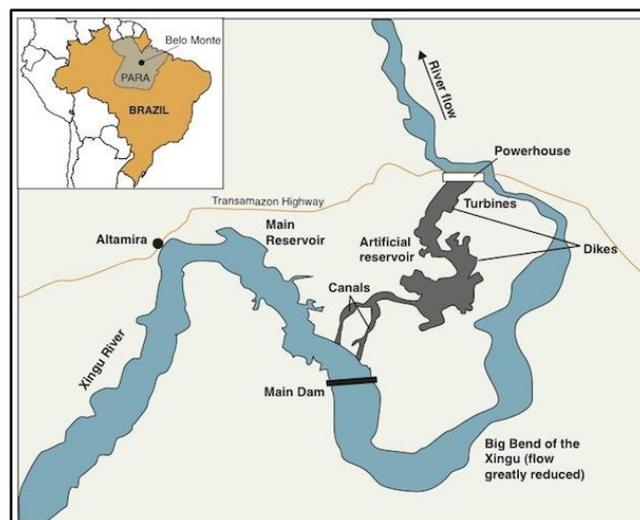


Redmen: Andreas Tanke (left) and Ingo Seidel (right) organize and host a fantastic event for catfish fans. Photo: Stefan Hetz.

Belo Monte

Leandro Sousa was first to speak on Friday night, and captivated the audience for almost two hours providing an update to the subject he presented at the 2015 CSG Convention. I didn't expect a good news story and the recent progress with the construction of the dam (and destruction of the river) has been rapid. The stretch of the rio Xingu that flows from the Pimental diversion dam to the outflow of the Belo Monte hydroelectric dam is a unique series of rapids and cataracts stretching for hundreds of kilometers; the Volta Grande, or Big Bend.

The Pimental dam diverts water from above Volta Grande to fill the reservoir that drives the turbines at Belo Monte, which is then returned to the Xingu downstream of the rapids. Pimental will restrict the flow of water through the rapids, and severely dampen the high-flow pulse the rapids currently receive during the rainy season. It remains uncertain how endemic fishes adapted to life in Volta Grande will respond to the new flow regime... but few scientists think it will be positively.



Schematic of the Pimental (main) and Belo Monte (Powerhouse) dams on the rio Xingu with respect to Volta Grande (Big Bend). Reproduced from Rio Times Online.

However, there are threads of hope for some ornamental species we keep which occur above and below the impact zone, but the future of *Hypancistrus zebra*, *H. sp. L174* and a number of other well-known species is in the lap of the gods. Later talks on commercial captive breeding efforts convinced me that *H. zebra* will likely survive in captivity, but their existence in the Xingu is far from assured.

Progress with the *Hypancistrus* breeding facility on the banks of the Xingu has been significant although issues with a clean water supply are posing problems. Any thoughts of rain water harvesting from what should dependable feature of this region were placed in stark relief after learning that the region much less rainfall than expected, and climate change could cause even greater threats to this incredible river, as well as the operational efficiency of Belo Monte.

The Wood Eaters

On Saturday Ingo and Andreas introduced the phylogeny of some of their favourite plecos; the wood-munching *Panaque* and its relatives. Firstly, the log-busting *Panaque*, then the dwarf *Panaqolus*, and finally – a difficult subject for many taxonomists – the *Cochliodon* group. Despite their apparent similarities, they are three genera which have each converged on a similar morphology. The *Panaque* being closely related to *Hemiancistrus*, *Cochliodon* to *Hypostomus*, and *Panaqolus* within a clade composed of *Peckoltia* and *Hypancistrus*!

Andreas and I share a passionate interest in *Panaqolus*, a genus distributed throughout the Amazon basin showing lots of local endemism. *Panaqolus* can be split into four main groups on a morphological basis (and corroborated genetically). 1. Tiger plecs such as L169 and L002 and the attractive L397 are popular among aquarists for their vivid colouration. 2. Clown plecos including the first ‘L’ number kept by aquarists – *P. maccus*. 3. Lyretail *Panaqolus* (e.g., L453). 4. The black-and-white-spotted group including *P. albomaculatus* and *P. albivermis*. Diet and preferred habitats were discussed although later talks covered these aspects in even greater detail.

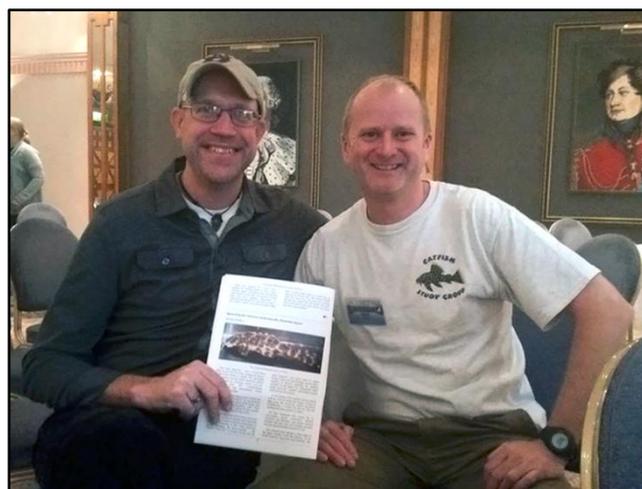
The ‘beastie boys’ were followed by another helping from Leandro, this time joined by Christian Cramer – a relative New Kid on the Block (to continue the hip hop theme!). Christian has followed the path of many ichthyologists with an early passion for fishkeeping and natural history.



Panaqolus sp. L397. Photo: S. Grant

With help from Nathan Lujan, Christian has worked to resurrect *Panaqolus*, following years of debate among scientists.

Christian presented his molecular research into the group and showed convincing support for the distinction of this group from *Panaque*. Christian has described an existing L number as *Panaqolus nix*, a very attractive spotted member of the group. Leandro and Christian also linked the Xingu theme with useful collection information and locality of *Panaqolus* sp. L398, which is also close to receiving a scientific name.



Nathan and Mark discussing the spawning report for *Panaqolus lujani*. Photo: C. Whitehead.

An Andean Adventure

To round off a packed Saturday morning, Nathan Lujan treated us to a trip along the Andes from Bolivia, through Peru and into the Guiana Shield and introduced us to some high-altitude loricariids such as *Chaetostoma*; many which were new. Nathan’s main interest concerns the impact the rise of the Andes has had on the fish fauna of the region and he explained how one species was split in two as the geological uplift caused new watersheds to form. To keep on theme, Nathan concentrated on the species which were known to ingest wood and explained how nitrogen and carbon isotopes were used to investigate how species derive nourishment from this apparently indigestible food source.

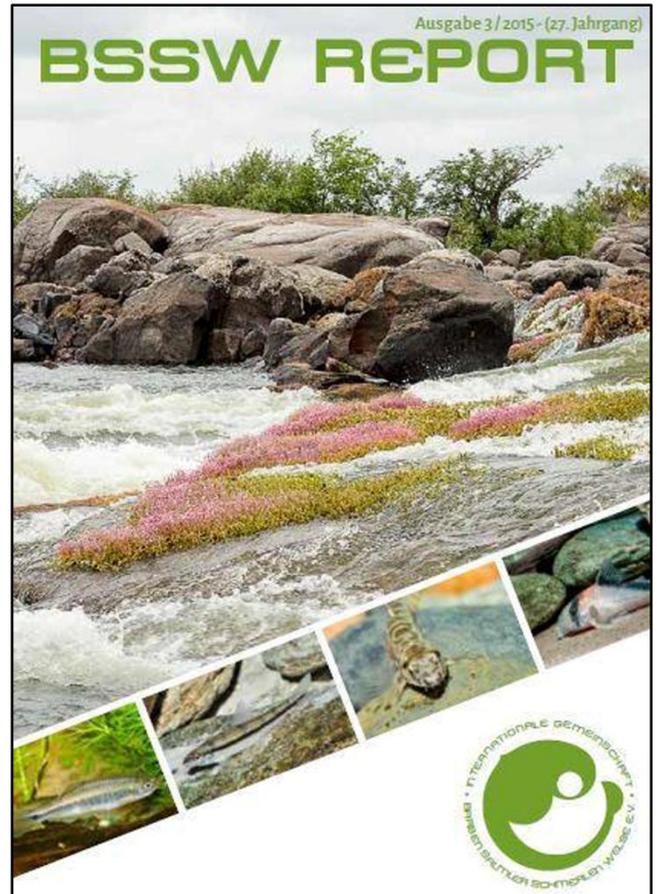
After lunch, Nathan presented his second lecture on various expeditions conducted in the Orinoco. Many L-numbers hail from here, such as L200, L128, L239 and numerous

Hypancistrus, *Peckoltia*, *Leporacanthicus*, *Pseudolithoxus* and *Ancistrus* species. Their location within the drainages is important with white, black and clear waters converging to form the Orinoco proper. Each stream system has its own species adapted to the particular chemical and physical characteristics. The Orinoco proper has a mixture of these systems, and more general species to match. Species such as *Ancistrus macrophthalmus* and *Peckoltia lujani* are found in the main Orinoco drainage, useful to know in their upkeep. In addition, there are several less familiar species including the very unusual *Hypancistrus vandragti*, *Pseudancistrus pectegenitor* as well as upland rheophiles like *Lithoxus*, *Pseudolithoxus*, *Exastilithoxus* and *Neblinichthys*.

Nathan continued with his epic adventure and explained the geological history of the Guiana Shield and the species that occur there. One species represents the only member of its genus in Venezuela, with its closest relatives isolated over 600km to the east in Guyana, Suriname and French Guiana. The species was discovered by Nathan and named *Lithoxus jantjæ*, found in torrential habitats above Salto Tencua, a waterfall in the upper Ventuari River in southern Venezuela.

Nathan described the personal nature of the description of the species: *'I named this species after my mother, Jeanne Hekman-Lujan, who was born in the Netherlands and nicknamed "Jantja" as a young girl. Just as my mother was dislocated far to the west of many of her relatives when she immigrated to the United States in 1951, the apparently disjunct distribution of this genus on opposite sides of the western Guiana Shield provides an important clue to the existence of an ancient river basin, called the proto-Berbice. The proto-Berbice may have been almost as large as the modern Orinoco River, but flowed east around the southern side of the western Guiana Shield and exited out the mouth of the modern Berbice River. Early geologic evidence for this river came from oil exploration off the coast of Guyana, where cores into the ocean floor near the mouth of the modern Berbice River indicated that a much larger river had once exited there. In 2010 I traveled further up the*

Ventuari River to search for more biogeographic evidence of the proto-Berbice, and in January 2016 I'm planning to visit the Ireng River in Guyana for the same reason. By combining field work throughout the western Guiana Shield with well-resolved, time-calibrated phylogenies for a broad diversity of taxa, we should be able to reconstruct the breakup history of the proto-Berbice based on relationships among the many disjunct fish populations it left behind.'



The BSSW group supports the L-number days and produces its own magazine in German and English.

PlanetAncistrus

The final speaker of the day was Walter Lechner, and he performed a wonderful double act with his translator Daniel Konn-Vetterlein. Walter is an Austrian, who appears to have spent much of his life underwater in both marine and freshwater habitats studying bioacoustics. His research took him to the Rio Negro where he sampled many locations. Loricariid diversity appears to be limited in this river, although *Ancistrus* species are as successful here as they are elsewhere. Many of the species are

undescribed, except for the true *A. dolichopterus* – the white-seam bristlenose. The Negro is archetypal blackwater system – tannin stained and warm. In addition to *Ancistrus*, Walter presented a diverse range of Pimelodidae, Heptapteridae, Callichthyidae, Doradidae, Auchenipteridae and Cetopsidae. Other loricariids included *Dekeyseria*, *Squaliforma*, *Pterygoplichthys* as well as numerous loricariines. A very unusual catfish present in the Negro is the ‘worm-like’ catfish found amongst the damp leaf litter of the forest floor (*Phreatobius*). Walter shared some images of this and another no doubt new similar species which was almost amphibian in form.

Discussion Panel

After the talks were concluded, the speakers assembled as a panel to discuss how the hobby and science can work together. This subject is at the heart of my interest in catfish keeping. I started keeping fish which led to an academic interest and postgraduate study. I would have loved to have had the opportunity to continue in research but took a different career path. My hobby now gives me back the opportunity to interact with the scientific community, better understand the biology and distribution of catfish and hopefully provide some insights into their behaviour.



L-number days 2015 speakers & organizers. Photo: A. Tanke

The panel confirmed the mutual help that hobbyists and scientists can provide each other and further strengthened those ties. The same is true for both food and ornamental fish aquaculture. The talks on Sunday focused on pleco breeding at small and commercial scales.

Loricariidae Reproduction

Hans Mengshoel presented a report on his success with one of the wavy line *Hypancistrus* – L173. The species appears similar to *H. zebra*, although its bands are not uniform. A number of morphological characteristics differentiate it further from the zebra pleco, although it has a similarly low fecundity. With the profusion of wavy line types in the hobby, Hans explained that he will try to maintain the Norwegian line of this species as carefully as possible; it would be too easy for contamination to occur from other similar species which are more closely related to the L066 types. Hans has bred and raised a good number of L173, which show a fair degree of variation in the offspring with some approaching patterns more typical of *H. zebra*. The species is sympatric with *H. zebra* and equally threatened by Belo Monte. Thankfully, there are numerous good breeders who are maintaining the species to secure its immediate future in captivity.

The second BSSW breeding report came from a young German aquarist who has also taken himself away from his fish tanks to the wilds of South America. Markus Kaluza has bred the red-finned *Pseudacanthicus* (L24), recently described as *P. pitanga*. Although hatching many hundreds of fry, the youngsters share a trait with other *Pseudacanthicus* and become aggressive towards their siblings. As a consequence, Markus managed to raise just a fraction of each brood – around 20 individuals – still an excellent achievement! Markus followed up his account with a report from an area he visited where the river had been impounded by a dam. The resulting lake housed a large population of *Megalancistrus parana* which, although they had survived, were in an emaciated state due to their preferred food source (sponges) being in short supply. This example serves as a warning for the fate of species affected by other dam projects across the continent.

Rajanta Sinardja Rahardja has been a regular speaker at L-Welse and returned with updates on breeding success at the Bellenz fish farm in Indonesia. Some of the stats thrown at us were phenomenal and the comparisons with commercial food-fish farming were obvious. The

advantages of aquaculture in the tropics are obvious with 'free heating', plus reduced labour costs compared to Europe at least. Rajanta still presented significant electricity and food bills, along with a substantial workforce to maintain a business which now produced over 500 market-size zebra plecos every month, plus many other *Hypancistrus*, *Panaqolus*, *Pseudacanthicus* and *Scobinancistrus*.



L-number days in full swing. Photo: A. Tanke

In addition to the standard types, the farm has isolated unusual variants of the wavy-line *Hypancistrus* to fix a fine-lined and leucistic varieties of *H. zebra*. It seems the future of some of these endangered species is secured in the hands of professional fish farms and the hobbyists can work with them to maintain genetic diversity in their own stocks. Rajanta promised to return in 2017 to help inform other breeding programmes.

The following day, I was fortunate enough to be invited to a BBQ held by Andreas at his home. I joined several other conventioners and toured his incredible fish room. After four days away, I spent the next 24 hours in the airport waiting for a flight back to foggy England. Thankfully I had resisted the temptation to take any fish home with me, which would otherwise have been rather uncomfortable in my suitcase! The event gave me a fresh view of aquatic events and organisations, and provided me with some ideas for improvements for the CSG moving forward as an influential international group.

