# Observations on a New *Drosera* Species in the Ord River Region (Australia)

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Summary

During a trip we took to the Ord River region in 1995, we discovered a tropical sundew apparently distinct from *Drosera indica*. In April 2001 we returned to the Kimberley Mountains and refound this new *Drosera*. We documented on digital video this amazing new species, which develops tentacles with grotesque yellow "heads" that lack mucilage. An herbarium specimen was sent to Dr. Jan Schlauer, who confirmed the *Drosera* to be a new, distinct species and kindly agreed to provide a description to validly publish a scientific name for the plant.

## First Discovery

Back in April 1995, the two of us were walking through a spear-grass meadow in the Ord River area north of Kununurra, filming carnivorous plants for a video (Hartmeyer & Hartmeyer, 1995). On that particular day, one of us (SH) found a single plant of a remarkable sundew, which at first glance looked like a red *Drosera indica*. On closer inspection it differed from *D. indica* by the much more delicate looking trapping leaves which had a conspicuous deep red colour, as well as by the orientation of the inflorescence which arose parallel to the erect stem. Odd, light yellow blotches shined through the plant's herbage. These yellow blobs—apparently on the leaves—seemed to be pollen from the various grasses growing in that habitat. We filmed the amazing plant and showed it on our video with the question to the viewer: "This can probably be a new species. Please give us a feed back if you have ever seen such a *Drosera*."

The first reaction came from Dr. Jan Schlauer (a prominent carnivorous plant expert and coeditor of Carnivorous Plant Newsletter), when we showed parts of our new movie at the 1995 annual meeting of the German carnivorous plant society (GFP) in Merzig. He thought the whole plant looked very interesting and asked us for any living plants, seeds or herbarium specimens. Unfortunately on our first trip we did not find any ripe seeds and it goes without a saying that on our video tours we strictly follow the advice: "Take only pictures, leave only footprints". So all we could show were our video pictures, and those were not sufficient to describe a new species, even one as interesting as this.

We were convinced that what we found in the eastern Kimberleys was something related to, but distinct from *Drosera indica*. We planned another trip to find it. However, due to serious health problems which forced one of us (SH) to retire, travelling was impossible for us for a long time. Six long years passed before we returned to the small Kununurra airport, in April again, glad and excited.

## The Rediscovery

The weather was much more humid than in 1995. April in the Kimberley moun-

tains means the end of the wet season. The rains brought a lot of moisture this year, and the humidity was still more than 80%. The weather forecast predicted temperatures of nearly a constant 34-36°C (93-97°F) in Kununurra—even the night time temperatures did not drop below 24°C (75°F)! With such oppressive conditions, we decided to spend our mid-days scouting for interesting sites in the air-conditioned safety of our rented car, to take breaks during the hottest part of the day, and to return to interesting locations in the later afternoon for filming. It is much more difficult to detect *Byblis* and *Drosera* in the afternoon because their flowers close and the plants can hid among the grasses.

We first drove to the meadow several km north of Kununurra where we had found the fascinating red sundew six years ago. But this site was still flooded and not even a *Utricularia* flower was visible. We inspected the surrounding area but without success. A little disappointed, we stopped at another place where in 1995 we had found huge *Drosera ordensis* inhabited by small *Cyrtopeltis* bugs. Again we were disappointed because some kind of cable had been laid along the roadside, and the surface was now covered with a thick layer of laterite and sandstone gravel. All the vegetation was destroyed.

In Germany people say: "All good things are in threes!" So we decided to make a third attempt to find this sundew, and followed our own advice for finding carnivorous plants in the Kimberleys, which we gave in one of our videos (Hartmeyer & Hartmeyer, 1995): "Look for groups of *Pandanus* trees in spear-grass meadows along the road." We travelled until we found a group of four or five of these distinctive trees along the road, and then stopped the car. The grassy meadows start around 3 to 4 m from of the road. After only a few steps into this meadow, we were astounded to find that we were not standing in front of *Drosera burmannii* or *Byblis filifolia*, which would have been typical. No, we almost did not believe our eyes because the first carnivorous plant we found this day was the red species we were seeking! Our first plant, and we had planned to spend the next two weeks looking for it! Despite our excitement and high spirits, we decided to return to our bungalow for a refreshing break. (35°C, i.e. 95°F, can be very hot if there is no shade to retreat to!) After the tropical sun reduced its power a little, we reapplied our sunscreen, added some "Bushman Ultra" insect repellent, and drove back to the site to record the *Drosera* on digital video tape.

It was April 21st, about 4:30 p.m. An additional macro-arm for the camera was fixed on a tripod for some close ups, and the white balance was set. The soil was fine sand, which was eroded from the very old sandstone formations of the Kimberleys known as "Bungle Bungles," and also contained fragments of red laterite. We had to kneel to videotape the plants, and in doing so discovered that the dry-looking soil was actually moist because our pants began wicking water from the ground. Evaporation of this moisture must help produce a cool micro-climate that helps the plants survive in these hot, sunny sites. The gravel deposited by the road-building crew, although just a few meters away, was dry and too hot to stand on barefoot—as you might expect almost no vegetation grew there.

The spear-grass is the dominant vegetation, and grows approximately 2 meters tall. *Pandanus* trees are of course present, as well as several other grasses, some small flowering herbs, numerous flowering *Byblis filifolia* (inhabited by symbiotic *Setocornis* bugs) and a few small *Drosera ordensis* plants.

After a first look on the small LCD screen of the video camera, one of us (SH) realised that the bright yellow blobs visible in the original, 1995 video were present on the leaves of these plants as well. Furthermore, they were clearly not caused by adhering grass pollen. The yellow blobs occurred on nearly on every leaf, approximately 5 mm from the stem. We theorized they could be the eggs of a butterfly? An attempt to remove the "eggs" showed that they were attached to the plants, and actually behaved like parts of the plant. Very strange for a sundew!



Figure 1: The new *Drosera* in the field.

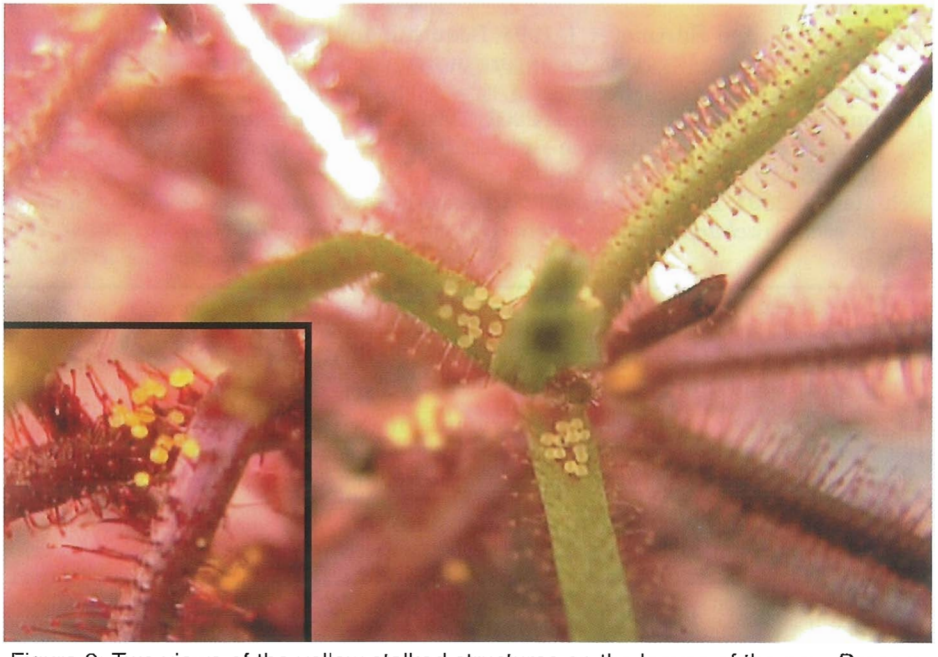

Figure 2: Two views of the yellow stalked structures on the leaves of the new *Drosera*.

As I (SH) studied these plants, I heard Irmgard's voice: "Zwanzig Meter weiter sind noch mehr als hundert Pflanzen." The camera was moved and the nicely pink-flowering and fruiting insect-eaters were inspected more closely. After several minutes of investigation, it was clear that we needed to send herbarium material to Jan Schlauer for more study, because the yellow blobs definitely seemed to be a regular feature of the plants. They appeared on every leaf, and looked like modified tentacles carrying a yellow, non-sticky head instead of a mucilage droplet. At present the function of these strange structures is just speculation. However, no other *Drosera* species produces such yellow structures—certainly *Drosera indica* does not have these features.

At about 6:00 p.m., the temperature display on Siggi's watch indicated 29°C (84°F). As the air cooled, the relative humidity rose, and we could feel it. Fine streaks of mist rose from the soil among the spear-grass plants. We filmed the tropical sunset, but it soon became time to return to "Kona Lakeside" because the biting insects ("mossies") became so numerous that even our "Bushman Ultra" repellent was useless.

That evening, we celebrated the rediscovery of our sundew by viewing the fresh video footage of our "catch of the day," and drinking a very fine bottle of Australian Cabernet Sauvignon.

Back in Germany we quickly met with Jan Schlauer. On the basis of our preserved herbarium material he confirmed our suspicions that the plant was a distinct, new species. He agreed to describe this amazing sundew with a new species name, so we could concentrate on working on our new video. For the botanical description of this plants, see the report in this same issue of Carnivorous Plant Newsletter (i.e. p 104, Schlauer, 2001). Also, do not hesitate to visit us on the internet at: www.hartmeyer.de.

References

Hartmeyer, S., and Hartmeyer, I. 1995, Beautiful and Hungry—Carnivorous Plants Part 2, Hunting Veggies® Video (private production), contact the authors of this article.

Hartmeyer, S., and Hartmeyer, I. 2001, Destination Carnivorous Plants (German title: "Reiseziel Insektivoren—Fleischfressende Pflanzen") CD-ROM produced by IBS-Multimedia (Germany).

Schlauer, J. 2001, *Drosera hartmeyerorum spec. nov.* (Droseraceae), a New Sundew in sect. *Arachnopus* from Northern Australia, Carniv. Pl. Newslett. 30: 4, 104-106.

## Looking Back: CPN 25 years ago

John Burnes revealed his trick for improving ventilation and humidity in terraria: "I connected an old aquarium air pump to an air stone with plastic tubing. The air stone was placed in a quart jar of distilled water (about 2/3 full) inside the aquarium. This moving air and bubbling water seems to have helped my plants greatly...."

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