Tropical Bryology Group visit to Uganda - June/July 1998

Four members of the Tropical Bryology Group left for the final field trip to Uganda on 29 June 1998. We had planned to visit the Rwenzori mountain range but political instability meant this was impossible. The purpose of this visit was therefore to record bryophytes from montane forest on the slopes of Mt Elgon and, if time allowed, to record from within the caldera at the summit of the mountain. Those taking part were Ron Porley (leader), Catherine LaFarge, Jeff Duckett and, at short notice, Howard Matcham, deputising for Nick Hodgetts who had to withdraw. The visit lasted for 23 days. As in the previous visits, our initial base was at Makerere University campus in Kampala where we were to pick up two vehicles, collect permits from the Science Ministry for those on their first collecting trip, and arrange for maps of Mt Elgon and the necessary entrance permits from the National Parks Office. This took longer than we had anticipated as apparently faxes from the UK had either gone 'missing' or had simply not arrived. Eventually the paperwork was complete but a day had been lost in the process.

As it was intended to spend as much time as possible on the mountain, a great deal of thought had to be given to the logistics of the expedition - the amount of food and water needed to sustain the four of us, and how to carry it up the mountain. This all had to be purchased in Kampala as our next stop was to be the town of Mbale, 250 km from Kampala, where it may not have been possible to buy the amount required. We eventually left the university campus on 2 July, driving a Land Rover and a four-wheel drive Suzuki, both exceedingly well maintained by Bob Lyazi and his staff. The drive to Mbale took us over the spectacular Owen Falls Dam, formerly a cataract on the Victoria Nile just below Lake Victoria. The dam was completed in 1954 and provides hydroelectric power for much of Uganda and Kenya; it is also used to control flood waters.

On arrival at Mbale we booked into the Mt Elgon hotel; two nights were spent here while we arranged to hire porters and guides. Mbale is about 50 km from Mt Elgon. There are two routes up the mountain; the Sasa trail which approaches from the west, and the Piswa trail from the north. We chose to follow the latter trail which, although the longer of the two routes, is less well known from a botanical point of view.

Having settled into the hotel, our next appointment was with staff from the Mt Elgon Conservation and Development Project who enthusiastically informed us that they had no knowledge of our impending arrival and that we must return to Kampala in order to obtain a letter with the appropriate official stamp on it which would enable us to gain entry into the National Park. This would have meant a loss of a further three days – the trip was fast becoming a bureaucratic nightmare. Fortunately, diplomacy triumphed, and we were now entitled to stay on Mt Elgon for a month. Officially!

We were informed by the Development Project staff that guides and porters are not park employees and have to be hired from a co-operative called the Mt Elgon Guides and Porters Association. They are trained by park rangers and are knowledgeable and reliable. As we had chosen the Piswa trail, the guides and porters were to be hired at the village of Kapchowa some 60 km from Mbale. We decided to buy our remaining stores, kerosene, tilly lamps etc. the following day, and then drive to Kapchowa and arrange for porters and guides to accompany us on our trek up the mountain. The road to Kapchowa was very badly maintained, and we were relieved to arrive without vehicle damage. Unfortunately, on arrival, we found that we had been misinformed; guides and porters were not available at Kapchowa but needed to be hired at the base camp at Kapkwata, some 30 km further on - too far to continue that day and return to Mbale before dark.

We made an early start the following morning, 4 July, leaving behind at the hotel all non-essential clothing, cases etc. After a seven-hour drive we arrived at Kapkwata Forest Station, heavy rain having made driving conditions for the final 20 km very difficult indeed. At Kapkwata we were met by staff from the American Peace Corps, who are managing the National Park for and on behalf of the Mt Elgon Conservation and Development Project. Here we were provided with porters to carry all our food and equipment, a guide and an armed ranger. Six days after leaving the UK we were on our way!

The following day was spent trekking the 11 km up to the Piswa camp at 2850 m. This first stage took us through open country grazed by sheep and cattle, up into *Podocarpus*-dominated forest with rock outcrops on which *Grimmia laevigata* and *G. longirostris* were prominent. The final stages of the steep ascent to Piswa took us through *Olea africana* afro-montane forest, inhabited by Blue monkeys and the spectacular Black and White Colobus monkeys. These forests support a very different bryophyte flora from that experienced on the previous visits to the western forests of Uganda.

Epiphylls were almost totally lacking, and were only found on three occasions, twice on *Podocarpus*and once on the underside of the lichen *Lobaria retigera*. In fact Lejeuneaceae were generally scarce, as were Calymperaceae; *Calymperes, Syrrhopodon* and *Octoblepharum* were not seen on Mt Elgon. *Porotrichum* and *Porothamnium* were scarce and pendant species from the genera *Pilotrichella*and *Orthostichopsis* were not seen. However, some genera that were scarce or absent in the western forests were abundant on Mt Elgon, and included *Neckera, Cryphaea, Prionodon ciliatus* and*Hylocomiopsis cylindricarpa. Rhizofabronia perpilosa* was found on the decaying underside of *Olea africana*, the first time that we had seen this genus other than on a tree-fern. The hepatic genera*Frullania*, *Porella* and *Plagiochila* were abundant, and *Hagenia abyssinica* trees had their trunks smothered with an *Herbertus* sp. The African *Herbertus* and *Plagiochila* species are currently being worked on by Nick Hodgetts, who has tentatively named the above as *H. lobatus.*

We spent the day recording in the *Olea africana* forest before deciding to continue up the mountain to make a detailed study of the epiphytes on the two endemic giant groundsel species, *Senecio johnstonii* ssp. *elgonensis* and *S. barbatipes.* The former is found from the upper forest belt, through the ericaceous subalpine belt and up to the lower edge of the Afro-alpine belt (Pócs & Szabó, 1993), while the latter species is dominant between 3800 and 4000 m in the true Afro-alpine belt (Pócs & Szabó, 1993); this was confirmed subsequently by our own observations.

Because of restrictions on camping sites (only two were allowed on the mountain, 16 km apart) and very difficult terrain, it was not possible to walk too far from the Piswa camp site. The opportunity to record from the caldera and ridges below the caldera could only be achieved by continuing up the mountain to the next camping site at Hunter's Caves, at about 3650 m, some 400 m below the rim of the caldera. From here it was possible to record both from the caldera and from lower down the mountain and return before dark.

Three days were spent recording in the caldera and ridges below the caldera and also lower down the mountain at the Hunter's Caves camp site. The moss *Rhytidium rugosum* and the hepatic*Plagiochasma rupestre* were frequent in the caldera, but it was on the rim that the greatest bryophyte diversity was found. *Grimmia apiculata, G. obtusolinearis* and *G. trichophylla* are all new to Uganda, and the moss *Claopodium pellucinerve* found by Ron is a genus new to Africa. Another very local species in Africa is *Racomitrium crispipilum*, found on block scree; it was previously known only from

Rwanda (Born, Frahm & Pócs, 1993; O'Shea, 1995) and from South Africa (Hodgetts, Matcham & Duckett, 1999).

Both *Senecio* species had a restricted but similar suite of species on trunks and branches which included most of the species recorded by Tamás Pócs and András Szabó in their work on the epiphytic vegetation on the endemic giant groundsel *S. barbatipes* (Pócs & Szabó, 1993). These included *Antitrichia kilimandscharica, Leptodontiopsis fragilifolia, Neckera submacrocarpa, Orthotrichum arborescens, Syntrichia cavalii* and *Zygodon intermedius.*

The nights were very cold and we awoke to quite severe morning frosts. It also rained frequently and we were pleased to have had porters carrying our equipment with plenty of available warm clothing. The inclement weather made drying our collections difficult. A prior arrangement had been made for porters to carry our collections the 27 km back to base camp at Kapkwata for drying and this was duly undertaken. In the event this was a very sensible precaution and the staff at Kapkwata did a very good job in ensuring that our numerous collections were thoroughly aired.

The final day at Hunter's Caves was very rewarding with superb *Tetraplodon mnioides*. Jeff found what was subsequently identified as *Haplomitrium gibbsiae*, the second record for Africa. It was first found by Jeff in Lesotho (Hodgetts, Matcham & Duckett, 1999) three years previously.

A slow descent to the Piswa camp site allowed us to collect from the ericaceous belt on the way down. An interesting epiphyte was *Zygodon seriatus* with long (eight-celled) gemmae and beautiful orange fenestrations on the basal cells. Many, as yet unidentified, species were collected here. We remained at Piswa for a further four days collecting in various afro-montane forest types: *Hagenia abyssinica – Rapanea melanophloess* forest, *Podocarpus* forest and *Olea africana* forest.

Here we split into two groups of two, plus porters and guides, which enabled us to record various forest types by descending and ascending from the Piswa camp. This worked very well and enabled us to cover a much more diverse range of habitats during the time remaining to us on the mountain.

Looking at a very wet cliff in *Olea africana* forest, Jeff and I found an *Asterella* species which has been named by David Long as *A. khasyana,* a well-known Asiatic species (D. Long, pers. comm.) It is only the second record from Africa; the other is from Burundi and was found by David amongst specimens in Jena (D. Long, pers. comm.). Other thalloid hepatics collected on this trip included*Plagiochasma eximium* and *Targionia hypophylla* on an earth bank just outside the park boundary a*Notothylas* sp. (new to Uganda) was found.

The weather by the end of the four days at Piswa was becoming extremely inclement, with very heavy rain. Jeff and I set off back down the mountain to record from steep-sided river banks and boulders in the river before it became too swollen to record safely. Ron and Catherine remained at Piswa camp to record from waterfalls and rock outcrops. We were all successful, with many new records; these included two aquatic *Racomitriums*, a broad-leaved *Schistidium* and *Cinclidotus fontinaloides*.

Despite mainly cold and wet conditions this was a very successful expedition, made so by all the cheerful help shown to us by the porters, guides and ranger.

Following our final descent from the mountain, one night was spent at Mbale and then one more day travelling back to Makerere University. Two further days were spent at Lake Mburo National Park where were able to relax in warm weather. The only bryophyte

recorded from here was an *Erpodium*sp. However, this was made up for by spectacular birds, which included the Pennant-winged Nightjar, and a brief sighting of a leopard.

The final day at Kampala before flying home late in the evening was a complete nightmare, as we were refused an export permit, although correct procedures had been carried out, which included confirming when we arrived that an export permit would be made available. However, it was not to be and, disheartened that all our hard work might be lost, we had to leave Uganda without our specimens. We were able to leave them at the herbarium in Makerere University and subsequently in January 1999 they were eventually released and arrived back in the UK.

Expedition members are now working through their collections, along with specimens collected on the other two field expeditions for the project. So far the project as a whole has identified 54 hepatics and 48 mosses new to Uganda (Porley *et al.*, 1999), with only a fraction of the total number of collections identified to species level. Much work remains to be done.

We would like to thank Professor Derek Pomeroy of Makerere University for his sterling efforts over a six-month period negotiating with the relevant authorities for the release of our specimens. We are all immensely grateful.

We would also like to thank Nick Hodgetts and Martin Wigginton for their help in planning this field visit and for supplying maps of Mt Elgon. The expedition was part of a project generously supported by the UK Government's Darwin Initiative.

References

Born S, Frahm J-P, Pócs T. 1993. A new checklist of the Mosses of Central Africa. *Tropical Bryology***8:** 223-273.

Hodgetts NG, Matcham HW, Duckett JG. 1999. Bryophytes collected in Lesotho, the Natal Drakensberg and the Orange Free State, southern Africa. *Journal of Bryology* **21:** 133-155.

O'Shea BJ. 1995. Checklist of the mosses of sub-Saharan Africa. *Tropical Bryology* **10:** 91-198.

Pócs T, Szabó A. 1993. The epiphytic vegetation on the endemic giant groundsel *(Senecio barbatipes)* of Mt Elgon, Kenya. *Opera Botanica* **121:** 189-194.

Porley RD, O'Shea BJ, Wigginton MJ, Matcham HW, Hodgetts NG, Stevenson CR. 1999. Bryophytes of Uganda. 2. New and interesting records. *Tropical Bryology* **16:** 179-193.

HOWARD MATCHAM, *21 Temple Bar, Strettington, Chichester, West Sussex, PO18 0LB*