

Captive Exotics Newsletter

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Coming Events you will find us at

	Date
Australasian Carnivorous Plant Society meeting: We'll be there with some of the new release <i>Nepenthes</i> .	14th January 2011 7:30pm-10:00pm
Australasian Carnivorous Plant Society meeting	11th February
Mt Tomah Botanic Gardens: Captive Exotics share a stall with members of the Australasian Carnivorous Plant Society. A great opportunity to pick up some interesting carnivorous plants.	26,27th February and 5,6th March 2011
Australasian Carnivorous Plant Society meeting	11th March

What we're up to

Things are heating up here and to be honest I can't wait for the Christmas break even though I've just returned from holidays. I spent the last week of October and half of November running around the mountains of Borneo with a great group of mostly *Nepenthes* enthusiasts and other equally crazy tourists. This took us to some of the most beautiful *Nepenthes* sites in Malaysian Borneo and left us all with some tails to tell! It also gave me the opportunity to visit some of the sites where the plants that I sell originated (see *N. bicalcarata* and *N. hirsuta* articles).



Figure 1: *Nepenthes* sp. Palawan

After Borneo it was on to the Philippines with my good friends and fellow explorers Stewart McPherson and Mark Jaunzems. We headed to the island of Palawan and with time to climb just one previously unexplored mountain were rewarded with a new species (see front cover and figure 1)! This new species is quite variable but can produce lower pitchers that are wider than they are tall and upper pitchers that are completely black (front

cover).

Back in Sydney plants started to grow rapidly with the increase in light and many species of *Nepenthes*, *Pinguicula*, African *Drosera* and *Sarracenia* flowered. *Amorphophallus* are up too and I've started to take leaf cuttings so hopefully some more species can be made available next winter. I've also cut some *Rhododendrons* so will have limited cuttings of a few more species in March/April.



Figure 2: *Amorphophallus konjac*

Most of the cuttings taken in October are growing so we'll be able to release some sort after species in March also.



Figure 3: *Nepenthes aristolochioides* upper pitcher

We're continuing to add more lines of other carnivorous plants and some not so carnivorous to the list so keep an eye out for these as many are in short supply.

For those who purchased *N. aristolochioides* (Figure 3) cuttings from us this you please label them as "*N. aristolochioides* Captive Clone 1" This is important for keeping track of the various clones out there. We will be adding as much data as possible with all the plants we sell which will assist in conservation as in the future this data may prove vital even for species considered common now.

The Rare *Nepenthes* Collection Project has been initiated by Stewart McPherson (See page 5) and we're a proud supporter pledging cuttings of all 4 species to the cause. It is critical that a project like this succeeds as we feel that in the future more species will

need to be added to the list as interest in these amazing plants increases locally. The pressure from collection and habitat destruction has never been so great. We urge you all to support this. Remember every little bit counts.

Stewart McPherson's new books "*Carnivorous Plants and their habitats*" are out (See advertisement on page 8). You can order via Captive Exotics or via the Redfern website www.redfernnaturalhistory.com

Wishing you and your families all the best for the new year.

Good growing
Captive Exotics



Figure 4: *Nepenthes chaniana* on the slopes of Mount Murud, Sarawak, Malaysian Borneo

A new conservation initiative: The Rare Nepenthes Collection Project

It is a sad fact that more and more species of *Nepenthes* are endangered. Conservation of a species is often difficult in its natural habitat for several reasons like habitat loss, poaching and climate change. This makes the preservation of genetic bloodlines of an endangered species in cultivation very important.

For this purpose Stewart McPherson, well known for his magnificent books on carnivorous plants, has taken the initiative to form the Ark of Life Foundation. This non-profit foundation will initiate projects to preserve and protect genetic bloodlines of endangered spe-



Nepenthes aristolochioides in cultivation at Captive Exotics



Left to right: Paul Kessler, Stewart McPherson and Marcel Van Den Broek. Photo by Art Vogel

cies in cultivation.

The first of these projects has just started. The Rare Nepenthes Collection Project aims to ensure the continuing existence of the four most endangered species of *Nepenthes*.

These four species were not selected based on a list, but based on real life field observations. For instance, *Nepenthes rajah* is an endangered species (CITES list 1), but it occurs in reasonably well protected area. Therefore its endangerment is far less critical than the four selected species.

- *Nepenthes aristolochioides* Jebb & Cheek, West Sumatra, Indonesia. Limited to two populations of only a few dozen plants in the wild.



Nepenthes khasiana in cultivation at Captive Exotics

- *Nepenthes clipeata* Danser, West Kalimantan, Indonesia. No known viable remaining populations in the wild.
- *Nepenthes khasiana* Hook.f., India. Limited to about 20 small sites in the wild.
- *Nepenthes rigidifolia* Akhriadi, Hernawati & Tamin, North Sumatra. Limited to one known remaining location of 3 individuals.

The project will try to preserve all known ex situ lineages and obtain genetic material not yet in cultivation. It will also seek extension of participants both in this plants homelands and abroad en try to raise awareness to the threats to this species and their habitats. Plants produced by this project will be used for research and hopefully reintroduction to their natural habitat.

This project is a joined operation between the Ark of Life Foundation, the International Carnivorous Plant Society and the Botanical gardens of Leiden (NL), where this collection will be housed. Last August, during the ICPS conference at Leiden the project agreement was signed.

At this moment people are working hard to get an information website on line and searching for suitable plant material.

So far several important growers of *Nepenthes* have already agreed to provide plants and seeds from their collection to this project, thus giving this project a good start.

More information on the project can soon be found on www.arkoflife.net. If you wish to make a donation or have a specific genetic strain of one of the target species you wish to donate, you can be contact the project at info@arkoflife.net which will be activated at the same time as the website.

Marcel van den Broek
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Plant Profile: *Nepenthes bicalcarata*

Nepenthes bicalcarata (**Figure 1**) with its distinctive fangs is one of the most intriguing species of climbing pitcher plants. It occurs throughout Malaysian Borneo and Brunei in peat swamp forest from sea level to 950m elevation and can be found growing from deep shade to full sun.



Figure 1: Enjoying the soaking wet conditions, Greg Bourke with *Nepenthes bicalcarata* lower and upper pitchers. Sri Aman, Malaysian Borneo. The soil here is a shallow accumulation of peat over a sandstone rock shelf. This shallow soil allows *Nepenthes* to compete with other vegetation.

Growing up to 2m across *N. bicalcarata* is one of the largest *Nepenthes* species. The vines are also some of the longest reaching 25m in length in shady conditions.

The lower pitchers are yellow to dark red in colouration up to 25cm tall by 15cm in diameter and generally darken with age. The upper pitchers are slightly smaller in size and usually remain green.

This species has an association with the ant species *Camponotus schmitzii*. The tendril of the *Nepenthes* forms a hollow section that the ants make home. From there they explore the plant and its pitchers for food. What is most outstanding about these ants is that they are able to climb directly into the pitchers and swim around in the fluid to steal prey directly



Figure 2: A newly opened lower pitcher of *Nepenthes bicalcarata* Sri Aman



Figure 3: A large lower pitcher of *Nepenthes bicalcarata* growing at Sri Aman. This is a pitcher several months old so both the pitcher body and peristome have darkened.

from the pitcher. It is thought that they assist the plant by helping to break up larger prey.

In October 2010 I visited the site where the Sri Aman clone originated to photograph the plants. This clone produces nice greenish to orange lower pitchers that age to dark red (**Figures 2 and 3**). The upper pitchers (**figure 4**) are typical for the species being beautiful

green in colour.

The Marudi plants we sell differ slightly in that the pitchers are more red when first opened but age to a similar colour.

In cultivation this species is easy to keep provided temperatures are kept high. For best results temperatures should not fall below 20 °C although it can tolerate temperatures as low as 10 °C for short periods. High humidity and good air movement should also be maintained as with all *Nepenthes* species.

Potting mixes can be straight coir peat, coir peat/perlite, coir peat/sand or sphagnum peat/sand mix



Figure 4: A large green upper pitcher of *Nepenthes bicalcarata* growing at Sri Aman. Note the swollen tendril coil where the ants *Camponotus schmitzii* make their home.

Carnivorous Plants and their Habitats

After six years in the making, it is my pleasure to inform you that Redfern's latest book titles *Carnivorous Plants and their Habitats* are now at the printers and will arrive in the UK for distribution during the first week of August.

These works are by far the most **spectacular, comprehensive** and **detailed** books that I have authored, and the two volumes of *Carnivorous Plants and their Habitats* examine the wild ecology, diversity and natural history of all carnivorous plant genera worldwide. This detailed and beautiful study reveals carnivorous plants in unparalleled detail to botanists and naturalists, and provides horticulturists with specific information to cultivate carnivorous plants with a greater level of success.

Part of the **unique content** of this work includes four spectacular **new** *Nepenthes* species (*N. gantungensis*, *N. holdenii*, *N. hamiguitanensis* and *N. palawanensis*), and detailed coverage of the **new** carnivorous genus *Philcoxia*.

These works can be preordered for just GB £29.99 prior to the arrival of the stock, with a saving of GB £4.99 off the retail price (GB £34.99) once the books arrive and are released.

The two volumes of *Carnivorous Plants and their Habitats* are 1,441 pages long, and includes 799 spectacular images.

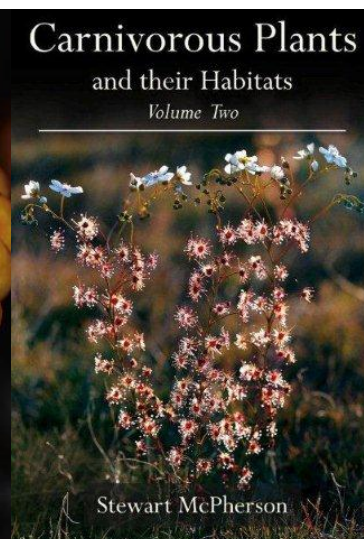
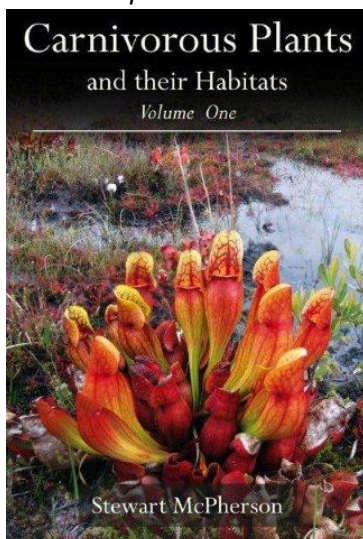
My best wishes to you all, Stewart McPherson, Redfern Natural History Productions

Volume One covers the following chapters:

Introduction
Tables Turned: A New Natural Order
Carnivorous Plants of the World
Evolution of Carnivorous Plants
Associated Life: Mutualists and Infauna
Habitats of Carnivorous Plants
Snap Traps
Aldrovanda
Dionaea
Pitcher Plants
Darlingtonia
Heliophora
Sarracenia
Nepenthes
Cephalotus
Brocchinia
Catopsis

Volume Two covers the following chapters:

Sticky-Leaved Insect-Eating Plants
Triphyphyllum
Drosera
Drosophyllum
Roridula
Byblis
Pinguicula
Proboscidea
Philcoxia
Corkscrew Plants: Genlisea
Bladderworts: Utricularia
The future of Carnivorous Plants and their Habitats
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Plant Profile: *Nepenthes hirsuta* Kuching Spotted

Nepenthes hirsuta is a species from Borneo mostly found in shady conditions. It generally produces smallish green upper and lower pitchers on a 3 to 8m long vine. In November 2010 I visited the location in Sarawak where possibly the most spectacular form of the species occurs (**Figure 1 and Back cover**).

The species occurs from sea level to over 1100m elevation. I had seen it growing in the Bako National Park near Kuching at sea level and Bario (**Figure 2**) at over 1000m elevation. At these locations grow typical forms with small green pitchers. So I was surprised to find that the Kuching Spotted form growing at 500m - 800m asl produces large mottled pitchers with a beautiful broad peristome.



Figure 1: *Nepenthes hirsuta* Kuching Spotted growing at 600m elevation



Figure 2: The typical form of *Nepenthes hirsuta* growing at over 1000m elevation near Bario.

This plant does not occur close to Kuching as the name suggests but on a few hills in the south west of the state of Sarawak. Pitchers of young plants are similar to those of other forms with narrow peristomes and attaining a size of approximately 10cm. These have slight mottling of purple. However, when plants become mature larger pitchers to 17cm are produced with broader peristomes.

In cultivation *N. hirsuta* Kuching Spotted grows well in lowland to intermediate conditions. It can be grown in most potting mixes but prefers a terrestrial mix like straight coir peat, coir peat/perlite, coir peat/sand or sphagnum peat/sand mix

