

biodiversity that exists around the Sacramento area. The Mediterranean region of California is designated by Conservation International as a Biodiversity Hotspot. ([www.biodiversityhotspots.org](http://www.biodiversityhotspots.org)), i.e. an area with a large number of species that are only found locally and which has lost over 70% of its original habitat. The California Floristic Province is home to the giant sequoia, the planet's largest living organism, and holds a number of threatened endemic species.

*Connect* (Association of Zoos and Aquariums), April 2009

### San Diego Zoo, California, U.S.A.

In September 1994 the zoo's horticulture staff received a request for assistance from Cincinnati Zoo. They wanted an emergency shipment of *Ficus* browse. Cincinnati's male Sumatran rhino, Ipuh, was very sick. He had not eaten or moved for several days and had lost 200 pounds (90 kg) of body weight. No one could diagnose his ailment, but if his condition did not change he was not expected to survive. Ipuh had spent several months in San Diego while Cincinnati completed work on his exhibit. While he was here, he developed a fondness for leaves from the Moreton Bay fig tree (*F. macrophylla*). Since he was not interested in his regular menu, the hope was that he would be tempted to eat with a tasty treat from San Diego.

All zoos are connected by animals and their caring staff, so in times of crisis responses are quick and effective. The San Diego Zoo horticulture staff have had years of experience shipping eucalyptus across the nation for the zoo's koala loan program. So while the office staff made flight arrangements, the tree crew cut and packed five boxes of the special leaves for a fast trip to the airport. We made it in time for that critical flight connection and the fresh foliage was offered to Ipuh that evening. Cincinnati

staff gave us some feedback. 'As it was unpacked he raised his head and sniffed the air as he struggled to his feet. He staggered forward to his first meal in days. Success, he was finally eating.'

Still weak and underweight, he would need continued shipments and longer-term assistance to fully recover. Dialog and discussions ensued. Could we continue these care packages? How much could we send and how often? What would it cost? Would we have enough trees to supply the demand? It would be a challenge, since harvest and packing schedules must be coordinated with flight schedules to ensure that fresh browse would be available for Ipuh's daily needs. Horticulture staff welcomed the opportunity to become closely involved with a rare species like the Sumatran rhino, and they developed a special commitment to Ipuh. The joint effort was successful and Ipuh recovered. In fact, he sired his first offspring, a male named Andalas, followed by a female, Suchi, who both grew to represent a new future for their species.

San Diego Zoo is still shipping *Ficus* for Ipuh and family – over three tons per month. The browse effort at the zoo extends into the surrounding community for donations of *Ficus*. The program also includes zoo employees who are not in horticulture, but are from departments like transportation or buildings and grounds. These employees make a difference by helping to pack the *Ficus* foliage for the shipments we make three times per week. The processing area is also a regular stop for school children during programs conducted by the zoo's education staff. Everyone involved is proud of what they are doing for Sumatran rhinos.

The success of the browse program is not accidental. It is based on years of experience, the zoo's botanical collections, and enthusiastic employees who want to make a difference. Over several decades, San Diego Zoo has developed the ability to ship browse across the nation in sup-

port of koalas and rhinos. Occasionally it also fills requests for other types of plant material to support insects, sloths, giraffes and primates. Operations are adjusted to include weather impacts on shipping schedules across the nation in order to meet the dietary needs of residents at other zoos. Supply and demand is a key challenge. To meet that challenge we have developed a wide variety of arrangements with government agencies, companies and private individuals who have the resources we need. People understand their connection to wildlife and our mission. The browse staff are so motivated they have their own mission statement: 'To develop and manage botanical resources for the sustainable harvest of dietary and enrichment browse material to support zoological collections.' They also have a vision statement: 'To be a world leader in the sustainable use of botanical resources for the essential support of zoological collections and their collaborative research.' They embrace this so strongly they have had T-shirts made with their vision statement on the back. It's inspiring to consider all the elements that come together and make it all work.

Zoo staff recently reviewed the latest strategic plan regarding browse. New species will have new requirements. Many critical species like Asian leaf-eating monkeys are dependent on foliage from a particular tree, and not every zoo has the capacity to offer the required diet elements. The future plan for browse is to further develop resources so that the zoo can provide seasonal supplements and regular deliveries to other zoos. This could create opportunities for some zoos to work with new special-needs animal species. Cincinnati is a good example of successful efforts between zoos. San Diego's climate and diversity of plant species, coupled with dedicated staff, make it an ideal support partner for zoos needing browse. The zoo recently conducted a special survey to determine the level of interest and type of browse need. The

results are encouraging. Please contact us ([dsimpson@sandiegozoo.org](mailto:dsimpson@sandiegozoo.org)) if you have browse interests or questions.

Abridged from Dan Simpson in *Connect* (Association of Zoos and Aquariums), April 2009

### News in brief

Chester Zoo, U.K., is running a 'dating agency' for Ecuadorian amazon parrots (*Amazona autumnalis lilacina*). Birds from throughout Britain and Europe are now brought into the zoo's Rare Parrot Breeding Centre. 'We put the parrots together and give them time to get to know each other and then select their own partner,' says Andrew Woolham, Team Leader for Parrots and Penguins. 'The pair will eventually bond by preening and spending all their time together. Once they are officially an item, we can send them on to other collections to start their new life together, and hopefully they will breed.' So far, the parrots have been sent to zoos and wildlife parks in France, Germany and Portugal.

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The birth of four panda cubs within a 14-hour period in China has boosted the population of this Endangered species. Estimates suggest that the number of surviving pandas in the wild is c. 1,600. In addition, 180 pandas are being raised in captivity in China. The four babies were all born at the Chengdu Panda Breeding Research Centre in Sichuan, with one female giving birth to twin female cubs, while the other two cubs were born to different mothers.