

decline (this is one of the complexities!). Having already defied the NMP by allowing a quota for bow-heads in Alaska, the Commission would threaten the credibility of the NMP if it allowed another infraction for the sake of another small coastal whale industry, that of Japan. But if a zero quota is imposed, Japan can quite legally, under the Convention, refuse to adhere to it. That is why it was easier for the commissioners to do nothing this time.

As a small compensation for the

ridiculus mus produced by the main item on the agenda, delegates were able to hear statements from the United States that the number of bow-heads struck but not killed had been substantially reduced, and from Japan, Norway and South Korea justifying their refusal to abandon the cold harpoon (agreed last July) by their failure so far to come up with a satisfactory substitute. But Japan assures us that research to find a safe explosive harpoon continues vigorously.

Good News About Orang-Utans in Sarawak

Michael Kavanagh

Hopes that a viable population of orang-utans can be conserved in Malaysian Borneo have been given a big boost by the discovery that they are more widespread than had been expected. In August–November last year a research team, consisting of officers from the National Parks and Wildlife Office of the Sarawak Forest Department and five scientists sponsored by WWF Malaysia, surveyed the proposed Lanjak-Entimau Orang-Utan Sanctuary adjacent to the Indonesian frontier. Previous reports had led them to expect to find orangs in the southern part of the proposed sanctuary, where the terrain is most rugged and there has been least human activity, but the development of a novel survey technique showed that the apes inhabit the northern part as well.

Orangs build nests in trees both for sleeping in at night and also for day-time dozing. Sometimes a single ape will build several nests in one day. One of the forest guards discovered that many of these could be spotted from a low-flying helicopter. A systematic survey flight was organized with the aid of the Royal Malaysian Air Force and in one hour of flying, nearly a hundred were counted.

More down-to-earth reconnaissance

and census walks showed that the apes are illegally hunted but it was concluded that with adequate protection, the population would increase until it reached the carrying capacity of the forest. Tentative plans to translocate orangs to Lanjak-Entimau from doomed tracts of forest elsewhere in the state were abandoned. Although the numbers of animals that would be involved in such an exercise might be very small, the disruptive effect on the resident community might be very great.

Healthy populations of other animals found during the survey included Sarawak's acrobatic lesser ape, the grey gibbon, two langurs and two macaques. Borneo has eight hornbill species of which seven were recorded in the area. Happily, they included large numbers of the bird that is Sarawak's official state emblem, the rhinoceros hornbill *Buceros rhinoceros*, and also the very beautiful but threatened Bulwer's pheasant *Lophura bulweri*.

Although Lanjak-Entimau has suffered from some shifting cultivation in the past, and the local Iban people have been free to hunt there – as long as they did not touch any protected species – the survey confirmed that the proposed sanctuary will include some excellent hill forest with



representative populations of most, or perhaps all, the animals that were to be expected. However, slim hopes that the Sumatran rhinoceros would be found in the area were not realized.

The forest is important for more than just the animals: when conserved as a wildlife sanctuary, it will continue to give vital cover to the catchment areas of eight rivers. Without its protective 'sponge' effect, serious fluctuations in the water levels would occur, causing dangerous flooding at times. In addition, dramatic erosion of the thin soil on the hillsides could be expected together with subsequent harmful siltation of the rivers.

A government-appointed Commission of Enquiry is recommending that Lanjak-Entimau be gazetted as the state's second wildlife sanctuary, thereby increasing the land within parks and sanctuaries to about 2 per cent of Sarawak's total land area. The survey has confirmed the wisdom of that decision and will eventually pro-

vide the Forest Department with a blueprint for the management of what will be the biggest single park or sanctuary in the state. A draft management plan has already been produced as a result of the survey and the final version should be ready this year.

Dr Michael Kavanagh, IUCN Conservation Monitoring Centre, 219(c) Huntingdon Road, Cambridge CB3 0DL, UK.

Plants and Man

Russell A. Mittermeier and Mark J. Plotkin

Many governments of developing countries consider that croplands and pastures are more valuable than forest, so they harvest the most valuable timber, turn the smaller trees into charcoal, and burn the rest. Often the whole forest is razed to the ground and burned. Not only does the timber thus become a non-renewable resource, but many other valuable species are lost, for only a handful of scientists know what these valuable non-timber species are, and only rarely has the information been made available to governments.

Ethnobotanical literature provides extensive documentation of the utility of plants for man, much of it based on knowledge accumulated by primitive cultures over the centuries. Most of these plants are being used only very

locally today, although they have the potential to become major national or international resources. For example, the bacaba palm *Oenocarpus bacaba* in Colombian Amazonia produces an oil that is chemically indistinguishable from olive oil; each mature tree produces up to 60lb of edible fruit and the trees grow well in semi-forested plantations. As the price of olive oil has increased 800 per cent since 1972, this palm has great potential as a crop species. In fact it should often be possible to demonstrate that a given hectare of forest is more valuable maintained intact as a source of forest products than converted to farmland.

The SSC has set up an Ethnobotany Specialist Group to explore ways in which ethnobotany can benefit con-