Gardening and conservation – is there a conflict?

Gardening has becoming increasingly popular in the developed world in recent years. Most gardeners are probably motivated mainly by aesthetics and are happy to use widely available mass-produced varieties of plants. Others become true hobbyists, perhaps specializing in growing certain kinds of plants. Aesthetics remain important but there is an added motive: to collect for collection's sake. Serious collectors – whether of plants, paintings, pottery or stamps – have one thing in common: they want to own the rare and unusual and, ideally, to possess something that no one else has.

While most collectors would not wish to enrich their gardens at the expense of wild habitats or knowingly buy plants that had been taken from the wild, some are less scrupulous. They may purchase illegally collected plants at great expense because of their rarity, even risking prosecution if they are caught. Such irresponsible behaviour should be discouraged most strongly and one might expect that Britain's influential Royal Horticultural Society (RHS) would take a lead in this. In fact, it appears to be doing quite the reverse. At the meeting, Species Endangered by Trade – a Role for Horticulture?, organized by the FFPS in London on 7 April, the Honorable Dr Alasdair Morrison OBE, a RHS council member, explained that the RHS did not have a conservation policy because its interests were too diverse and because it 'had never had one'. He went on to refer to the collection of wild plants as no worse than committing a parking offence. At last year's Chelsea Flower Show, the RHS's main event of the year, a Gold Medal was awarded for a display including wild plants. A few months earlier the exhibitor had been convicted of the illegal import of wild orchids into the UK in a court case brought by Her Majesty's Customs and Excise.

The RHS justifies its position by emphasizing that it does not give awards to illegally imported wild plants. However, the FFPS questions whether wild-collected plants should be considered for awards at all given that legislation to protect wild plants from unsustainable collection does not exist in many countries and where it does it is often inadequate or poorly implemented.

The FFPS Plants in Trade programme is seeking solutions to the conservation problems posed by the collection of wild plants. While bringing new species into cultivation is admirable and desirable, it should only be done in such a way that wild populations are not endangered. The FFPS's Indigenous Propagation Project in Turkey, where villagers are being encouraged to propagate bulbs instead of collecting them from the wild, is benefiting wild bulb populations, villagers and bulb traders alike. This approach might also be appropriate in other places in the world but solutions will be different for each plant, or group of plants, and each country.

Meanwhile, gardeners who wish to avoid buying wild-collected plants will not find it easy. Two recent publications* point out that, while the majority of plants available commercially in Europe and the USA are nursery propagated, large numbers of wild-collected plants are still on sale. Both give guidelines to the conscientious buyer.

When the FFPS investigated the bulb trade in 1987 it discovered that most of Turkey's 50 million bulbs exported each year were sent to the Netherlands and re-exported with the label 'Grown in Holland'. Discussions with the bulb trade resulted in a bulb labelling agreement under which all wild-collected bulbs leaving the Netherlands have to be labelled as 'Bulbs from wild source'. The FFPS is still striving to persuade dealers in the UK to adopt a similar agreement but the response has been patchy so far. Some retailers and wholesalers, particularly high-street stores and garden centre chains, have acted responsibly but others continue to sell wild bulbs without revealing their source and the British Bulb Distributors' Association is failing to take the lead role that it should.

Editor

* *Wild Plants in Trade*, Martin Jenkins and Sara Oldfield, 1992, TRAFFIC International, Cambridge. *The Gardener's Guide to Plant Conservation*, Nina T. Marshall, 1993, World Wildlife Fund US.

Tigers in the Russian Far East face renewed dangers

After making a strong recovery since receiving state protection in 1947, Amur (or Siberian) tigers *Panthera tigris altaica* in Ussuriland in the Russian Far East now face intensified persecution because of illegal trade in skins and parts used in Chinese traditional medicine.

In the southern and central Sikhote Alin mountains in Primorye and the southern Khabarovsk Territories, the number of Amur tigers had increased about tenfold by the late 1980s, compared with 1947 when only 20–30 survived. This was all that remained of an original population of perhaps 600–800 animals in the 1860s before the region was settled (Baikov, 1938). The Amur tiger had been almost exterminated by hunters for its splendid pelt and for parts of the body (especially the bones) used in Chinese traditional medicine, excess-ive live capture for zoos, reduction in availability of prey, and in some areas the clearance of its forest habitat. Russian scientists have carried out detailed studies of the Amur tiger in the wild for many years and according to the most reliable estimates there were recently about 300 on Russian territory, although some authorities, for example Bragin and Gapanov (1989), had put the number as high as about 430.

Since the ban on killing tigers, and the reduction of live capture to only one or two young animals each year under special licence (Sysoev, 1960), the numbers increased so that the great cats became something of a problem in the late 1980s. With more effective protection they seemed to have lost some of their caution towards people, and the search for food had made them bolder.

Man's overhunting of hoofed animals, a series of severe winters in 1982–84, disease, and failure of acorn and pine kernel crops, all adversely affected the prey species of the tiger, especially the Ussuri wild boar *Sus scrofa ussuricus*, although they may be capable of building up their numbers again. The numbers of wild boar fell from about 16,000 in the late 1970s to only about 7000 in the late 1980s

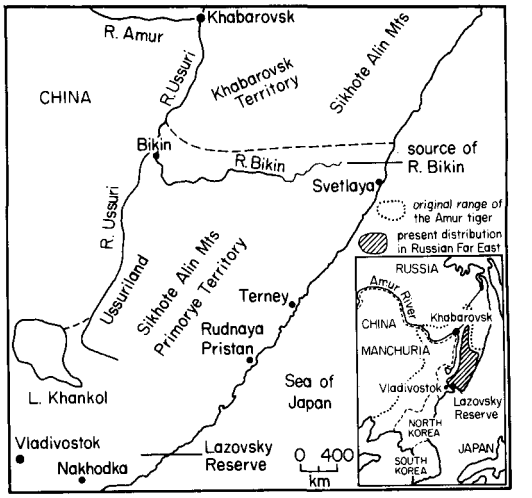

Figure 1. Map of the Russian Far East showing locations of places mentioned in the text.

in the Primorye Territory. Other important prey animals of the Amur tiger are the izubra or Manchurian wapiti *Cervus elaphus xanthopygas* and the Ussuri sika deer *Cervus nippon hortulorum* (Matyushkin *et al.*, 1980). The former is the most numerous large mammal in the Primorye Territory; most recent estimates of its numbers have been around 20,000, but this is not a very large population considering the area involved. The prey base for the Amur tiger, although satisfactory within the nature reserves, is less than adequate in the Russian Far East as a whole.

The tigers' habitat has been, and continues to be, degraded by logging, exploitation of minerals and the spread of other human activities. Consequently, tigers spread out from the mixed deciduous–coniferous forests, which are their usual haunts, into the higher, dark spruce–fir forests and into agricultural and settled areas (Pikunov, 1988a,b), searching for food. In 1986/87 they even appeared in large towns, including Vladivostok, Nakhodka and Khabarovsk. There have been numerous attacks on cattle (which roam freely in large herds around villages), many cases of tigers invading villages to carry off dogs, and, exceptionally, attacks on humans, which had been unknown for many decades previously.

The immediate response to this situation was to shoot increasing numbers of tigers.

However, the Russian nature protection authorities tried to deal with these problems more constructively by moving problem animals, protecting prey species and expanding existing reserves. Suggestions that there should be a drastic cull of Amur tigers have not been implemented.

Recently, new dangers to the tigers have emerged in the area. The economic crisis in Russia following the collapse of the USSR has led to intensified problems for the great cat. While local hunters of sable and other fur-bearing animals complain about the increase in the number of tigers in the great forests of the Bikin Valley, elsewhere the poaching of the tiger has become very serious. In the Lazovsky Reserve on the south coast of Primorye Territory, in 1990 there were more than 15 tigers and about the same number in the surrounding area. However, during 1991 about 10 tigers were lost to poachers in the area and in 1992 no less than 20. Each illegally obtained tiger skin can be traded for more than $US2000 and the whole of the body sold for use in Chinese traditional medicine for similar sums. At a time of runaway inflation, this profitable trade carried on with the Chinese, Koreans and Japanese is an attractive proposition. The frontiers are now more open and many Chinese enter Russian territory to trade and to farm plots of land by arrangement with the local government. As the police are overstretched, it is very difficult to control this illicit traffic in tiger parts and pelts, and so in this area of previously highest density for the great cats in Ussuriland, they are rapidly being wiped out. Several tigers were shot by poachers in the Terney area during 1992, near the Sikhote Alin Reserve, and their skins exchanged for foreign cars. In one case the tiger being hunted, killed and devoured the poacher. Tigers have also been shot while raiding deer farms in the area.

To compound the problem, a desperate shortage of foreign exchange has encouraged many joint ventures between Russian and in particular South Korean companies (notably Hyundai) to exploit the rich timber resources of the region. This has already occurred around the port of Svetlaya, 500 km north of Vladivostok, from where softwood timber is exported to Japan. Large areas of forest have already been destroyed. The primeval spruce–fir forests at the source of the Bikin River in the Sikhote Alin have been threatened in the same way, despite a ruling against this in the Russian Supreme Court in November 1992. This not only endangers the watershed, the magnificent primordial forests of the Bikin Valley and its wildlife (which includes a healthy population of about 40 Amur tigers), but also the livelihood of the hunting and fishing Udegei tribal people. Large areas of virgin forest, previously prime habitat for the Amur tiger in the Iman (Ussurka) valley, have already been degraded, and other areas north of the Lazovsky Reserve, at Rudnaya Pristan, have been desecrated by oil exploitation. Protecting the Amur tiger must, therefore, be regarded as an integral part of saving these unique forests of north-east Asia.

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This report follows a month-long study tour and investigation concerning the status of the Amur tiger in the Russian Far East, 20 August – 19 September 1992.

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Biodiversity on the menu in the Philippines

'Mother Nature has patiently helped evolve each and every type of root crop, fish and meat dish on your dinner plate right in her very own backyard – the lush and vast rain forests and the equally opulent seas – since a good hundred million years back. ..... But right now it is not getting any easier for Mother Nature trying to provide for her sons and daughters. Specially if you're talking about 5.7 billion sons and daughters to feed every day. And then of course there's the question of having your better-off sons and daughters consume more resources. Add to that the problem of serving the same food over and over again ...

Seaweed salad, seafood bisque and coconut cake – few fund-raising dinners offer such an exotic menu and fewer still produce an illustrated booklet, from which the above quotation comes, to give the background to each course. The Haribon Foundation, the oldest conservation NGO in the Philippines, had thought of everything to make sure that its 20th Anniversary celebrations in November 1992 brought the message home.

The Haribon Foundation was founded in 1972, predominantly as an expatriate bird-watching society. By 1984 it had become a fully fledged scientific organization, supported by Philippine scientists in many of the country's institutions. Since the late 1980s, it has undergone another transformation, reflecting the growing global awareness that the maintenance of a healthy environment is necessary for every one of us and that we all have a role to play in achieving it. Haribon, while maintaining its scientific concerns, is now heavily involved at the grass-roots level, working with village communities to help them develop sustainable livelihoods.

The focus of current fund-raising is the effort to halt damage to the country's coral reefs. Previously renowned as some of the world's most diverse, productive and beautiful reefs, they now have the reputation as the world's most damaged. The destructive activities of dynamite fishers and aquarium collectors with their cyanide have been given wide publicity. Haribon and its collaborators – marine scientists in the Philippine universities, tourist operators, and groups such as the Philippine Sub-Aqua Club – are in the forefront of efforts to stop this destruction.

Two marine conservation areas have been set up, based on the concept that management by the local people is likely to be more effective than government edicts. Local villagers enforce regulations at the marine sanctuary at San Salvador Island, in the province of Zambales. They ensure that no fishing takes place within its boundaries, that the young giant clams that have been introduced there are protected, and that fishermen in adjacent waters use non-damaging and largely traditional fishing methods.

Further south at Anilao, in the province of Batangas, tourism is becoming as important as fishing. Small resorts have sprung up along the coast, catering not only for overseas visitors and expatriate weekenders from Manila, but also to a rapidly growing community of Philippine divers and leisure-seekers. With the assistance of local government, diving groups, the resort owners, the Philippine Tourist Authority and the fishermen, three marine sanctuaries have been created within which fishing and all forms of collection are banned. The surrounding area, extending 500 m offshore and about 3 km along the coast is a marine reserve where traditional non-damaging forms of fishing are permitted. Mooring buoys for the dive boats have been installed, and Haribon is working with the local communities to help develop alternative forms of income generation.

It remains to be seen whether the decline of the reefs of the Philippines can be reversed but the omens are good. One of the country's top reef scientists, Dr Angel Alcala, has recently been appointed by the President as Secretary of the Environment. With someone of this calibre and commitment in a key political position, there is hope indeed.

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