



The Internet as a Pathway for IAS

The Internet and Global Trade

By 2001, China alone was adding around 2 million Internet subscribers per month to an estimated 500 million existing users worldwide. Today, the number of Internet users is growing exponentially with some forecasters predicting that soon there will be an estimated 1.7 billion users. In the United States alone, it is estimated that 62 million Americans were using wireless devices to access the Internet during 2003, demonstrating the unprecedented ease and convenience with which the Internet is accessed today.

Although the above forecasts may turn out to be less than accurate, it is evident that the Internet is here to stay – and is fast becoming a globally accessible and convenient way of trade, opening up new and unmarked pathways of trade at an unprecedented pace.

Invasive Species

Once connected, billions of potential shoppers are a mere phone call away from having items from the farthest corners of the globe delivered to their doorstep within a matter of days or even hours. Coupling this remarkable ease of access with a growing global curiosity and appetite for the exotic, it is not surprising that the number of exotic and rare live plants and animals traded via the Internet is increasing at an alarming rate – in almost all cases without any consideration to the environmental and socio-economic consequences of this movement of live species across the globe.

Historically, many of the **world's worst weeds** were introduced through the mail after being ordered from mail order seed catalogues. Recently, there has been increased recognition of the potential for the Internet to dramatically increase the use of this route for the transfer of species across bio-geographic and political boundaries. Researchers in the United States and Australia have recently revealed shocking statistics on the extent to which the Internet is being used to trade plant and animal species around the globe – including many known to be potentially invasive. Live material includes species from a vast variety of ecosystems, like aquatic species, insects, mollusks, mammals, plants and seeds. In addition, cut flowers, fruit and vegetables which are traded illegally and are therefore not subject to normal controls, are also potential vectors. Adding to the already serious threat posed by the above, is the fact that most plants and animals carry on them micro-organisms, many of which are themselves disease carrying pathogens – and therefore invasive species in their own right.

Recent Research on Plant Sales via the Internet

- More than 700 Internet sites advertising seeds, bulbs and other plants and 200 advertising insects have already been identified, with actual numbers expected to grow significantly as research in this field continues.
- One Internet site from the United States was found to include in its list of plants advertised for sale
 - 2 United States Federal Noxious Weeds
 - a large number of potentially invasive grasses
 - noxious thistles
 - a variety of cacti
 - acacias and
 - numerous other known invasives.
- Apart from obvious sales sites, other potential online marketing venues on the Internet include forums, limited access sites, online discussion groups and auction sites.
- Research has indicated that suppliers often misidentify the species provided, thereby making control even more difficult.
- It was also found that most deliveries of aquarium and water garden plants were contaminated with other species, including other plants and macro-invertebrates (e.g. snails and crustaceans). These are sometimes more invasive in nature than the species actually traded.
- Of the 77 aquatic plant species restricted from sale in the United States, no less than a staggering 45% are openly available for sale on the Internet.

The Pet Trade

Trade in pets and pet products in the United States alone, is estimated to be worth some \$US30 billion annually, nearly half of which consists of imported wildlife. Exotic pets include rodents, reptiles, amphibians and others and can be purchased not only in pet stores, but by mail order catalogue and – at a rapidly increasing rate – also via the Internet.

Similarly, a recent article from Japan reports an enormous increase in the demand for exotic pets in this country. A local businessman reportedly logged onto the Internet, initiated a search for a rare pet, and found to his astonishment that he could order a wide range of animals from snakes to lemurs to turtles – to be delivered to his door.

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The range openly available, includes a variety of protected species from developing countries, including endangered snakes, rare tortoises, birds and tigers – in direct contravention with CITES. According to TRAFFIC, Japan imports an average of 30 000 live tortoises annually – 55% of the global trade. This includes the Indian star tortoise, Egyptian tortoises and Madagascar star tortoises, with the latter selling for as much as US\$ 10 000 each.

One of the perceived attractions of many of these species is that, although they are exotic, they are not too demanding to keep – a belief reinforced by the open and free availability of the animals via the Internet. This, however, is not always true, and there have been increasing reports of police being called in to assist with the recapture of escaped exotic and wild pets.

Apart from the potential for escapees to become established in their new country, many of them also pose health risks. This threat has added to a recent increase in opposition in both Japan and the United States to the importation of wild animals as pets. Civet cats, for example, have been identified as a possible source of the SARS virus in China. A recent outbreak of monkey pox in the United States has been linked to the import of Gambian giant pouched rats which passed the virus on to humans via the prairie dog. Other diseases which may be transmitted from wild animals to humans include Hepatitis B, the Ebola virus, Lyme disease and mad cow disease.

The Need for Regulation

Many countries have quite strict regulations in place to control the import of live organisms through regular channels. For the most part, though, such regulations do not deal with Internet sales. Moreover, Internet trading makes it easier for illegal sales to go undetected and thus significantly increases the risk of transfer of potentially invasive species, including diseases. There is therefore an urgent need to introduce some form of regulation of Internet sales of live material. Any strategy that is developed should include at least two components:

- Awareness raising – most Internet users and people ordering live material, and in many cases even the nursery proprietors, are unaware of the serious threat created by their purchases.
- A clear international regulatory regime.

A number of countries have already started developing controls, including compliance mechanisms. The United States Department of Agriculture (USDA), for example, has recently set up an Internet Surveillance Project, which includes an Agricultural Internet Monitoring System (AIMS), which enables regulators to identify sites advertising regulated species or products. The USDA however, only has authority over United States-based sites, although they are currently working with their Australian counterparts to try and prevent the materials from leaving their shores of origin in the first place as a preventative measure.

To be really effective, what is required is an international regulatory regime based on partnerships between the quarantine services in individual countries and the postal service which is responsible for the delivery of goods ordered via the Internet.

In this context, GISP would like to invite Contracting Parties to the Convention on Biological diversity (CBD) and all other interested and affected parties, organisations, researchers, scientists and others to consider how this matter could be taken forward.

For further information on this topic, contact Dr. Larry Fowler (USDA): Larry.Fowler@aphis.usda.gov
Dr. Sandy Lloyd (AWA): sllloyd@agric.wa.gov.au

GISP • National Botanical Institute • Private Bag X7 • Claremont 7735 • Cape Town • South Africa
Located at Kirstenbosch Botanical Gardens • Rhodes Drive • Claremont • Cape Town • South Africa
Tel: +27 (0)21 799 8836 • Fax: +27 (0)21 797 1561 • E-mail: gisp@nbi.ac.za • Web: www.gisp.org

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