Leung for alerting me to these). An increasing number of publications suggest there is little reason to doubt that they probably do, but since we may never know for sure, we certainly can't rule out the possibility. The lead article, on animal rights and conservation, helped me to make a new year's resolution; in deference to the Rooster (or at least to his hen), I will only buy free-range eggs from now on.

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YS

News from DEB

2005 seems set to become the 'Year of Biodiversity' if present indications are anything to go by. Already we have faced the invasion of the killer Fire Ants (*Solenopsis invicta*), which is already well established on the mainland New Territories, and faced the spectre of Giant Anteaters wandering down Nathan Road. But seriously, the idea that we should introduce exotic anteaters to control invasive ants makes little sense, especially when we have ant-eating Pangolins existing locally. Perhaps this suggestion reflects a broader lack of awareness about Hong Kong's native biodiversity, as I doubt many senior government officials would recognise a Pangolin if they were fortunate enough to meet one on a dark night. My initial reaction to the *S. invicta* scare was to assume that someone had made an error, and confused exotic *S. geminata* with its more obnoxious relative. *Solenopsis geminata* was first recorded in Hong Kong in the 1930s, and was still here when John Fellowes studied local ants for his PhD in the 1990s, so it is safe to assume that it has become naturalized. After some delay, however, the identification of *S. invicta* was confirmed. My second reaction to the invasion was to wonder if we could study the impacts of Fire Ants on native biodiversity. Such an investigation would require a comparison of infested and ant-free areas, and I doubt that we could justify allowing an infestation to persist just we that we could look at its effects. So, could government have done anything to prevent the invasion? I think the answer is 'not much'. The Fire Ants were in Guangdong for some time before their presence was announced and, given the number of colonies detected here, it seems likely that they were transported into Hong Kong with ornamental plants well before the alarm was raised in the run-up to Chinese New Year. A quick response from government aimed at eradicating established colonies was what was needed and what, in fact, happened.

A second biodiversity issue that has been receiving some attention is government's ongoing consultation process on measures to protect local marine fisheries. Views on this vary: some feel that the annual summer moratorium on fishing should be lifted (although there are no signs that China will make such changes to fishery regulations that apply to neighbouring waters) while, at the other end of the spectrum, there have been suggestions that all of Hong Kong's territorial waters be designated a 'no take' zone. There is an almost infinite variety of compromise positions that might or might not involve licensing schemes for commercial fishers. The key point is that debate has been initiated because (at last) someone in authority has not only noticed that the existing situation is unsustainable but has decided that something must be done to improve things.

And then there is the recently-announced Lantau Concept Plan … With regard to that, space (and, perhaps, politesse) does not allow me to comment. Instead, I have one other thing to report. At the end of 2004, a new Research Assistant Professor, Dr Yixin Zhang, joined DEB. Yixin did his PhD at Umea University in Sweden, and has since worked at the University of California in Santa Barbara and the University of British Columbia. He is a stream biologist, and will be spending his three years with us looking at land-water interactions, and their relevance for conservation and management. Yixin introduces himself elsewhere in this issue of *Porcupine!*

All that remains is for me to wish readers of *Porcupine!* a healthy and prosperous – albeit belated - Year of the Rooster.

David Dudgeon

Fire ant nest in Long Valley: the nests are unique in Hong Kong. (Photo: Billy Hau)

All about Yixin Zhang, "newtest" Research Assistant Professor in DEB

by Yixin Zhang

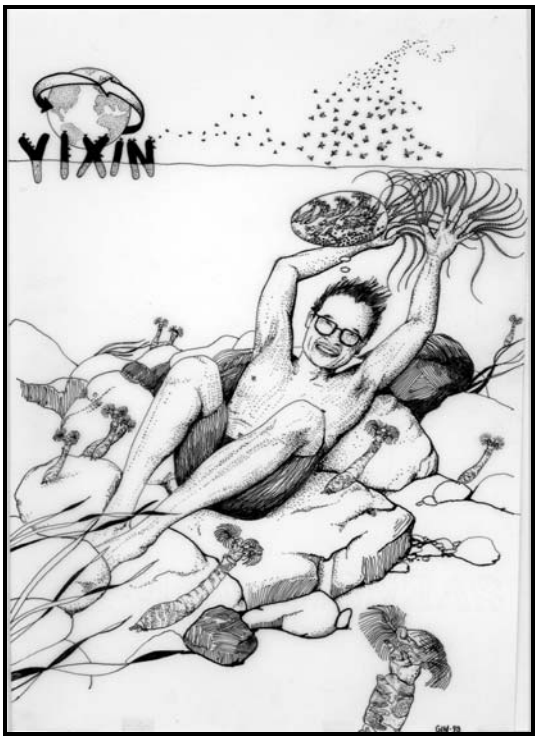
I got my M.Sc. and Ph.D. in Department of Animal Ecology at Umeå University in Sweden. After graduation, I received s Post-Doctoral Fellowship of Swedish Foundation for International Cooperation in Research and Higher Education and worked in the Department of Ecology, Evolution and Marine Biology at the University of California at Santa Barbara in USA. After that, I worked in the Department of Forest Sciences at the University of British Columbia in Canada as a postdoc and research associate.

Over the years, I have been asked by many people, “Why did you decide to go to Sweden for your graduate studies?” My answer was always the same, “Sweden gives the Nobel Prize to the world, and Swedish universities have a high standard for scientific research.” I had a tough beginning at the start of my graduate studies. The Department of Animal Ecology at Umeå University told me that it wanted to test my research capability first, before the department committee would discuss whether to accept me as a graduate student. I decided to take this risk to go to Sweden for my potential graduate study. I spent eight days travelling to Sweden by taking a cross-continent train from Beijing to Moscow, a train from Moscow to Helsinki, then to Waasa in Finland, and a ferry across the Baltic Sea to Umeå. After taking an advanced ecological course and completing a research project by working day-and-night, I was accepted as a graduate by the department committee.

My research direction in Sweden was to examine the effects of ecological processes on community structure of blackfly larvae in running waters, in terms of distribution, functional morphology and phenotypic plasticity, and feeding performance. In general, my questions were: how do blackfly larvae respond to variation in physical habitats at a large scale, such as hydrological change in a variety of river and stream systems, and how do these organisms respond, in terms of functional morphology and phenotypic plasticity, to variation in the availability of their food and hydrodynamic condition at a local scale? I was to immerse myself in these questions as well as in running waters. I sampled more streams and rivers than were visited by most Swedes; over 100 sites from the central coastal plain bordering the Gulf of Bothnia to the northern Swedish mountains within the Arctic Circle. These rivers often have elongated lakes and a number of falls and rapids. I enjoyed my fieldwork very much in those beautiful places with attractive scenery. My department at Umeå University had a high standard of academic requirement for PhD students: ten books for oral examinations, which covered many areas from evolutionary biology to scientific philosophy, from population ecology to theoretical ecology; writing grants for your own research funding; five papers including two single-author ones for the PhD thesis; an open defense of your dissertation, followed by a wonderful department celebration party, with a lot of drinking, singing, and dancing until midnight.

Having fledged from Umeå University, I went to the University of California at Santa Barbara. UCSB has a beautiful campus with a very wide sandy beach. Many students went surfing in the Pacific Ocean after classes. At UCSB, I studied the impacts of multiple predators on a shared prey to examine emergent predation effects on prey, which is not simply a sum of individual effects of single predator types. Emergent predation effects can be predation reduction referring to the case where the combined effect of multiple predators is smaller than the sum of single predator effects, or can be predation enhancement with a combined effect larger than the sum of individual effects. During the period working at UCSB, I was looking for postdoc possibilities in Canada because I already had Canadian permanent resident status.

In 2000, I moved to the University of British Columbia in Vancouver. I was told that UBC probably has the finest university campus in Canada. It is located on the tip of a peninsula surrounded on three sides by water and has a nice "clothing optional" beach. At UBC, I studied several projects, most of which were conducted in UBC's Malcolm Knapp Research Forest. (1) Trout foraging-mode shift and its effects on benthic communities. (2) Detritus processing, ecosystem engineering, and benthic diversity. (3) Trophic flows across habitats and their effects on ecosystem processes. (4) Cumulative catchment effects of forest practices on stream ecosystems.



In May of 2004, I met Professor David Dudgeon by chance in “a beer session” at the 4th World Fisheries Congress in Vancouver. Thanks to Qingdao beer, I found that we have lots of research interests in common. Later, I noticed an advertisement for an RAP position at HKU in Nature. I was fortunate to get the position, and joined this department as a Research Assistant Professor in September of 2004. At HKU, I am going to keep working on above-mentioned projects. I have received HKU Seed Funding for basic research to study ecology and genetic diversity of the stream-breeding salamander, the Hong Kong Newt (*Paramesotriton hongkongensis*) (Fig. 1, 2). I have proposed a broadening course (Global Environmental Change) and a research project (Trophic flows across ecosystems and terrestrial-aquatic linkages). As an honorary member in the Department of Forest Sciences at the University of British Columbia, I am continuing my research project supported by the Forest Research Program in BC, which investigates cumulative watershed effects on stream ecosystems. As the picture drawing, a graduation gift from my department in Umeå, shows I have traveled around the world and have been working on aquatic ecosystems in three continents. For this stop in Hong Kong, I hope that I can stay long enough to do my best to contribute my efforts to this department and to ecological studies in this region.

Fig. 1. Adult Hong Kong Newt

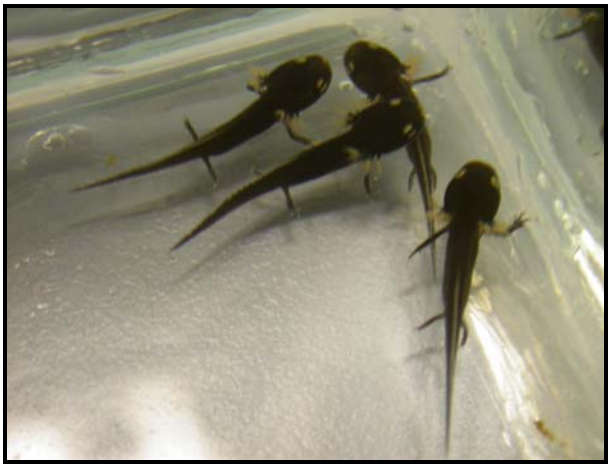


Fig. 2. Larvae of Hong Kong Newt (*Paramesotriton hongkongensis*).

VERTEBRATES

Preserving a gentle reef fish giant

by Yvonne Sadovy
IUCN Specialist Group for Groupers and Wrasses

Not so very long ago, the idea of a commercially important marine fish going extinct was considered highly unlikely, if not impossible. The assumption was that marine species are so widely dispersed and so fecund (productive of eggs) that there would always be places they could not be found, and that all those eggs endowed them with limitless capacity for recovery. Some biologists still argue that extinction is not possible, stating, in support of this view, that no marine fish has ever been known to go extinct from exploitation. Only time will tell whether or not they are right. However, we have learned enough about declines in populations of many fish species to know that these can be threatened with disappearance (or 'extirpation'), even if the species as a whole is not (Dulvy et al. 2003). Moreover, we now know that high egg numbers and wide geographic distribution are no insurance against serious depletions; the cod (*Gadus morhua*) and the southern bluefin tuna (*Thunnus maccoyii)* has shown us that. In any event, loss of single populations is the first step towards biological extinction and it makes little sense to wait until it is too late to see who is right.

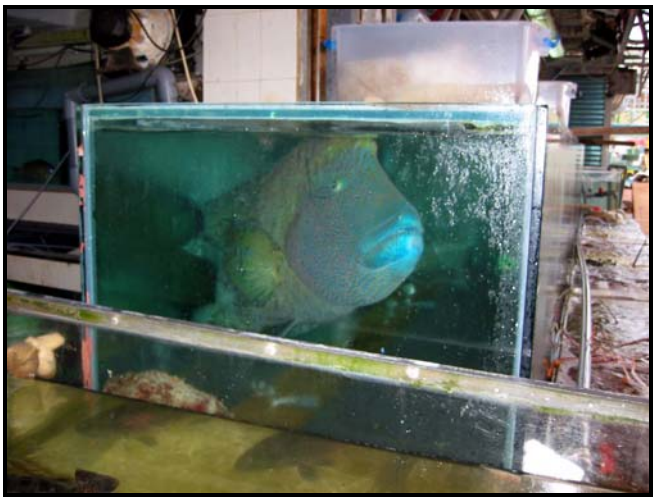


Fig. 1 Large humphead wrasse in small tank in Hong Kong. (Photo: Liu Min)

Many fish species for which serious declines have been noted are large and long-lived, often with life spans of several decades or more. Such species are likely to have rather low replacement rates and hence are particularly vulnerable because they are unable to withstand heavy fishing pressure. In other words, if too many fish are removed too quickly, the population will decline and, without management, dwindle and possibly disappear. This is especially likely if the species is particularly valuable because even if it becomes harder to catch, its value remains a big incentive to continue fishing. As just one example, a single large tuna can sell for US$40,000 or more. To make matters worse, increasing rarity may be associated with higher retail prices.

One of the largest and most valuable of all reef fishes is the humphead, or Napoleon, wrasse, *Cheilinus undulatus*, known better to many in Hong Kong as the 'So Mei' (Fig. 1). This species is a small but important part of the international trade in live reef fish for which Hong Kong is a major demand centre: at times its retail price has reached US$150/kg. So there is a lot of interest from traders and fishermen to find and market this species and, largely as a result of the trade in live reef fish, the humphead wrasse has declined in many areas. Even though it is widely distributed across the Indo-Pacific, sub-adults or juveniles, preferred as being a good 'plate-size' fish in restaurants, often occur inshore and are easy to overfish (Fig. 2). The species reaches 2 m in length and can live at