



TENTACLE

The Newsletter of the IUCN/SSC Mollusc Specialist Group

Species Survival Commission
IUCN - The World Conservation Union

No. 1 December 1989

ISSN 0958-5079

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This is the first issue of the newsletter of the IUCN Mollusc Specialist Group. We hope to produce it twice a year and will welcome any contributions relevant to mollusc conservation. This issue has been put together by Fred Woodward, and we are extremely grateful to him and Glasgow Museum for providing production facilities. Alison Kay thought up the name TENTACLE. The drawing of the *Partula* snail, which is our motif, has been kindly provided by Jersey Wildlife Preservation Trust. Sue Wells provided much of the material but hopes that in future the newsletter will become a truly co-operative activity. Its aim is to fulfill the need for a means of information exchange on mollusc conservation. Do write with your views, news, information or announcements and send in short articles. We hope to bring the next issue out in Summer 1990.

One subject prospective authors might consider is case studies on mollusc conservation projects, particularly their protection in the wild. Dr Jungbluth, at the meeting of the IUCN Mollusc Specialist Group in Tübingen, suggested putting together a list of model case studies; at the moment these are few and far between, but some immediate suggestions are *Margaritifera margaritifera*, several New Zealand projects (*Placostylus* and *Powelliphantia*), and North American and Hawaiian species. Regional or national overviews of threatened molluscs would also be valuable (the IUCN group would welcome information on areas with high molluscan endemism and serious habitat loss e.g. the Philippines, New Caledonia, Jamaica, Cuba, etc.).

The objective of IUCN's Species Survival Commission is to mobilize action to prevent the extinction of species, improve the status of threatened species and thus maintain the world's biological diversity. Through its Specialist Groups, it maintains an international network of independent volunteer members, selected for their expertise in species conservation, and provides a forum for the exchange of views and scientific information on species of conservation concern. The Mollusc Specialist Group consists of a core of invited members representing different taxonomic groups and geographical regions. However, it invites broad participation from any other interested persons and is hoping for wide distribution of the newsletter. Meetings of the Mollusc Specialist Group are held during the International Malacological Congresses and are generally open.



The main functions of the group are :-

1. To provide leadership for the conservation of threatened molluscs.
2. To determine and review the status and needs of threatened molluscs and to promote the implementation of necessary research and management measures.
3. To publicise such information through any appropriate means.
4. To promote the wise management and sustainable utilisation of all molluscs.
5. To ensure the conservation of molluscs through the development and implementation of conservation strategies and specific projects.

The main objective of the group at the moment is the production of the Action Plan. This is going through the final review process and will be published next year with the papers from the conservation symposium of the 9th International Malacological Congress held in Edinburgh. Any suggestions for conservation activities/workshops/meetings for the next Malacological Congress (Siena, Italy, 1992) will be very welcome.

We should make it clear that we have no budget for the newsletter at the moment. If it becomes a successful publication, we will need to find funds to keep it going on a regular basis. If anyone has any suggestions as to how these might be raised, please get in touch. One possibility is to levy a subscription charge, but it would obviously be an advantage if we could distribute it free.

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For further information on the **IUCN Species Survival Commission**, write to Dr. Simon Stuart, SSC, IUCN, Ave du Mont Blanc, Gland, CH - 1196, Switzerland.

The Chairman of the **Mollusc Specialist Group** is Professor Alison Kay, Department of Zoology, University of Hawaii, 2538 The Mall, Honolulu, Hawaii 96822, United States, who will provide information on the group and its activities.

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ATTENTION : IMPORTANT NOTICE

Please send any comments on format, requests for information, or contributions for the next issue by May 1990 to :

Fred Woodward,
Art Gallery & Museum, Kelvingrove, Glasgow G3 8AG, Scotland.

Sue Wells,
56 Oxford Road, Cambridge CB4 3PW, England.

NEWS

Euglandina : EFFORTS TO KEEP IT OUT.

The following recommendation was passed at the 17th Session of the General Assembly of IUCN in Costa Rica in 1988 :-

17.51 INTRODUCTIONS OF CARNIVOROUS SNAILS FOR BIOLOGICAL CONTROL PURPOSES.

AWARE that high density and endemism of terrestrial mollusc species is a significant characteristic of many islands in the Caribbean Sea, and the Indian and Pacific Oceans;

CONCERNED that many of these unique molluscan faunas are now seriously threatened;

RECOGNIZING that, in addition to habitat destruction, the presence of exotic carnivorous snails, in particular *Euglandina rosea*, introduced as biological control agents for the introduced crop pest *Achatina fulica* (Giant African Snail), has caused dramatic population declines in many endemic native land snails on many islands;

FURTHER RECOGNIZING that *Euglandina rosea* is known to have caused the extinction of native snail species in French Polynesia and Hawaii, and may have caused extinctions elsewhere;

NOTING that carnivorous snails are not effective control agents for the giant African snail, and that insufficient trials were carried out before their recommendation as control agents;

AWARE that national and regional organisations concerned with agriculture are still recommending the use of such agents for biological control;

NOTING that there is no currently effective method for eradicating *Euglandina rosea* once it has been introduced to an island;

FURTHER NOTING that the IUCN Species Survival Commission, in its Position Statement on 'Translocation of Living Organisms', states that no alien species should be deliberately introduced into any natural habitat;

The General Assembly of IUCN, at its 17th Session in San Jose, Costa Rica, 1-10 February 1988 :

1. **STRONGLY RECOMMENDS** that introduction of carnivorous snails in habitats with endemic land snail species be prohibited.
2. **REQUESTS** that appropriate government agencies, agricultural and other relevant institutions be circulated with information stressing the danger of such untested biological control efforts.
3. **SUGGESTS** that regional organizations concerned with agriculture and the environment should be charged with circulating the necessary information.
4. **URGES** further research into other methods of controlling the giant African snail, such as collection by hand, and into methods of eradicating *Euglandina rosea*.

This recommendation has been sent with a covering letter to the appropriate government agriculture and environment departments in 22 countries in the Pacific Ocean and a number in the Indian Ocean (Seychelles, Madagascar, Andaman and Nicobar Islands), urging them to act on it. The information is also being circulated by the South Pacific Regional Environment Programme of the South Pacific Commission. The first positive response has come from the Republic of the Marshall Islands. We now urgently need to put together a proper information pack with colour photos of *Euglandina* and other carnivorous snails.

Please get in touch if you can help, or if you know other countries which should receive the information [please also send the appropriate addresses of government agencies, etc.].

Euglandina : THE SEYCHELLES

Justin Gerlach, an amateur malacologist who divides his time between the UK and the Seychelles has managed to enthuse the Conservation Officer of the new Seychelles Environment Ministry about eradicating or controlling numbers of *E. rosea*. An appeal for live specimens was launched on Seychelles TV, with an offer of about 30p reward per snail. The specimens were to be sent to Dr Cook in Ireland for his research [see p. 11]. So many snails were brought in that the appeal had to be stopped so that those collected could be mailed before they died. There is now a problem finding the money for the reward.

It is unlikely that collecting them will eradicate them from the island of Mahe, but it may help to keep numbers down and impede the advancing front. As yet, no Seychelles species have fallen victim to the invader, but there are fears for the long term survival of the many endemic native snails.

Further information from Justin Gerlach, Wadham College, Oxford, OX1 3PN, UK.

Coloured stickers of the Manus Green Tree Snail *Papustyla pulcherrima* have been produced to promote a new book by R. Tucker Abbott - 'Compendium of Land Shells'. They are also designed to 'assist in the world-wide campaign to halt the cutting, burning and lumbering of natural forests' and have the slogan 'Save our Habitat'. Available from : Dr. R. Tucker Abbott, American Malacologists, Box 2255, Melbourne, Florida, 32902-2255, USA. Nine labels for one US dollar.

THE PAPUSTYLA is the newsletter of the Manus Landsnail Society which focuses on land snails and was started in 1987 by Ron Knight in Papua, New Guinea. It costs fifteen US dollars a year and is produced monthly. It is mainly orientated towards collectors but has quite a lot of useful information on land snails in the tropics and a fairly strong conservation bias.

Available from Daan Smits, P.O. Box 58, 3920 EB Woudenberg,
Netherlands.

EUROPEAN INITIATIVES.

Bern Convention

In November a colloquium was held to discuss further action on the invertebrates listed in the Bern Convention - the Council of Europe's Convention on the Conservation of European Wildlife and Natural Habitats. This was organised through the European Invertebrate Survey which has initiated a project to collect data on the listed species, of which 23 are molluscs.

There were four papers specifically on molluscs, three on *Margaritifera margaritifera* and one giving an overview of threatened European non-marine mollusca in relation to the Convention. There was general agreement that the invertebrates listed were useful in highlighting the need for the conservation of invertebrates and their habitats, but there were reservations about the criteria used for the selection of species, the status of individual species and the efficacy of the listings. Recommendations for the improvements were made.

Further information on Bern Convention activities is available from : Dr. M.C.D. Speight, Research Branch, Wildlife Service, Sidmonton Place, Bray, Co. Wicklow, Ireland.

European Invertebrate Survey (EIS)

At the Biennial Committee meeting of the EIS in November it was agreed that the group should now concentrate more of its efforts on Bern Convention activities. An EIS Newsletter is to be circulated. Contact Paul Harding, Biological Records Centre, Institute of Terrestrial Ecology, Monks Wood Experimental Station, Abbots Ripton, Huntingdon, PE17 2LS, who is seeking contributions for the next issue now.

Unionoida Newsletter.

Another newsletter shortly starting up is to be called *Das Glochidium*. This developed out of the Unionid workshop held at the 10th International Malacological Congress at Tübingen since it was felt that there is an urgent need to co-ordinate research and conservation projects on this group of freshwater bivalves. The group is under serious threat, as seen by the massive decline worldwide, many species being threatened and several having already become extinct.

Contributions on any aspect of this molluscan group or requests for information should be sent to Fred Woodward, Art Gallery & Museum, Kelvingrove, Glasgow G3 8AG, Scotland.



PARTULA PAGE

The story of the seven species of *Partula* from Moorea and their extinction in the wild through predation by *Euglandina* has been well documented. There is now an active captive breeding programme for the six species which exist in zoos and laboratories in Europe, Australia and the USA, supported by the IUCN Captive Breeding Specialist Group. This section of the newsletter will provide regular updates on the project; we hope to have articles on husbandry, re-introduction potential, threats to other *Partula* species, and discussions of why such projects are useful and whether they detract from conservation efforts needed for threatened species in the wild.

A workshop was held in November at London Zoo to discuss the *Partula* project. Over 4000 snails are held in captivity, the majority from Moorea, and smaller numbers from Tahiti, Huahine and Saipan where endemic *Partula* species are also threatened. The following institutions are involved :
University of Nottingham (over 2000 specimens, 7 spp.),
University of Western Australia (about 120 specimens, 5 spp.),
University of Virginia (about 500 specimens, 15 spp.), Jersey Wildlife Preservation Trust (about 700 specimens, 2 spp.),
Perth Zoo (about 30 specimens, 3 spp.), St. Louis Zoo (about 20 specimens, 2 spp.), London Zoo (about 200 specimens, 2 spp.),
Edinburgh Zoo (about 60 specimens, 1 spp.); one private individual is breeding one species (c.300 specimens). Specimens are also held in zoos at Antwerp, Chester and Berlin.

Of the Moorean species, *P. aurantia* has declined to a single individual held at the University of Virginia. *P. mirabilis* and *P. tohiviana* are now critically endangered with only 43 and 115 specimens respectively. The future of both these species depends entirely on the colonies at the University of Nottingham, which also holds the most significant stock of *P. suturalis* and *P. mooreana*.

It is virtually certain that the *Partula* species from Tahiti will also become extinct in the wild very soon thus placing great importance on the colonies of the six Tahiti species at the University of Virginia. *P. clara*, with a captive population of one, may be effectively extinct already.

We have recently heard that David Hopper, at the University of Guam, is working on the *Partula* of Mariana Islands and hope to be able to report on his work in a future issue of the newsletter.

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It is not very often that molluscs feature in the British Times Literary Supplement. But the story of *Partula* appealed so strongly to one of the regular contributors that in 1988 the following pieces appeared :-

"There is an island in the Pacific called Moorea. Well forested, rich in fish and fruit and snails. Snails of the genus *Partula*, seven species of *Partula*, like seven sisters. All went as merily as a marriage bell until twenty years ago,



when someone thought that what the island needed was herds of the giant African Land Snails, *Achatina fulica*, to give the Mooreans a new crop. But the gastropod Goliaths overleapt their paddock walls, escaped and started eating the traditional crops. Still the nine species in this story coexisted tolerably, tolerantly until someone, perhaps the same someone, thought that what was really needed was a task force of carnivore snails from Florida, *Euglandina rosea*. The molluscaceous Miami Vice would blow away the big Africans, restore the prelapsian state.

Not, you may rest assured, so *Euglandina*, like any bully anywhere, prefers its victims vulnerable. The fix is in: *Euglandina* has an arrangement with *Achatina* and is consuming the indigenous *Partula*, all species of which are consequently facing extinction.

Reader, you can save them. Or rather London Zoo's *Partula* breeding programme can, with your assistance.

The matter is too grave to be commemorated in prose, or in any pre-existing verse form. What is needed is a new form, the Helix, which mirrors the structure of the threatened creatures. Its more precise parameters are left to you. For every entry received this column will contribute a pound to the *Partula* Snail Appeal. The winner will receive the glory of having contributed to the frustration of an evolutionary process. And perhaps an adoption certificate."

A few weeks later the winner was announced in the Times Literary Supplement for May 6-12 1988 :

"And what, you may ask, of the snails of Moorea, and my request for a helical stanza to commemorate their fate? To your undying shame, only two entries. One, meticulously circumstantial but traditional in metre ('There were seven little snails, careless of fate,/ along came *Achatina* and then there were eight./ This giant chose the crops as food on which to dine./ So they brought in *Euglandina* and then there were nine./, tracing the fate of the seven sisters with great pathos) came, I'm pleased to say from Sue Wells, one of the organizers of the *Partula* appeal, now with the International Council for Bird Preservation. ('*Partula* have been made honorary birds for the time being', she tells me.)

More successful in finding a structure that revealed the snail's structure, if not their plight, was Jennifer Nimmo Smith of Edinburgh, whose verse you must visualize spiralling outward from an imaginary umbilicus :

Let us bewail the plight of the snail, *Partula*, O
Nature's carry-out,
a hapless meal, victim of progress, as the noble art,
calligraphy,
before the daisy wheel !

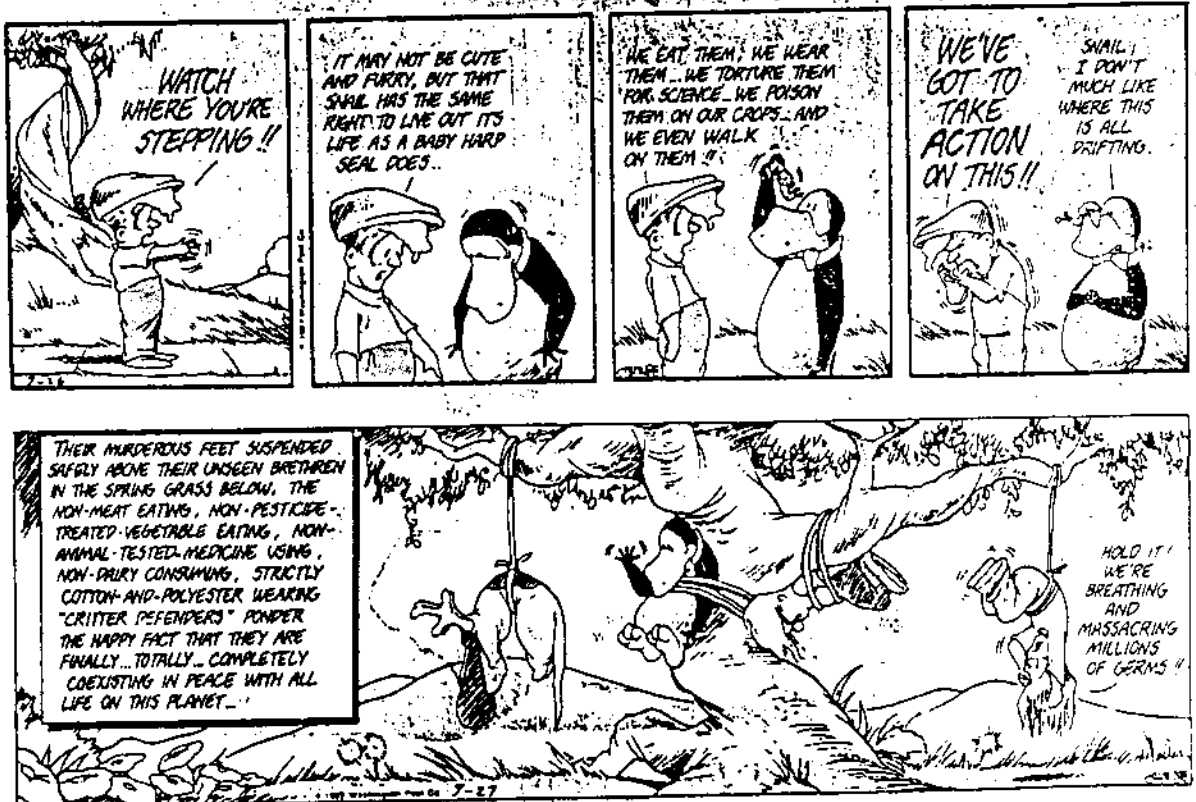
Ms Nimmo-Smith is victor pro. tem. but further contributions will be met with gastropod gratitude."

T-SHIRTS :- Partula T-Shirts are available from London Zoo. Medium and small sizes only left, but if there is demand they will print some more. Contact :- Paul Pearce-Kelly, Insect Department, Zoological Society of London, Regents Park, London NW1 4RY

RECOVERY PLAN FOR ACHATINELLA SNAILS IN HAWAII

Dr. Mike Hadfield, a member of the IUCN Mollusc Specialist Group, and his colleagues have drawn up a draft recovery plan for the endemic Hawaiian tree snails *Achatinella*. All 41 species were placed on the US Endangered Species List in 1981, and 22 of the species are listed as probably extinct. In 1984, the genus was listed on IUCN's list of the 12 most endangered animal taxa. Recent work has shown that only two species exist in substantial numbers today but that their numbers are rapidly declining. The Recovery Plan outlines a series of measures to protect the remaining populations. Unfortunately the US Fish and Wildlife Service have no money to implement the plan - another case of molluscs coming bottom of the pile.

BLOOM COUNTY by Berke Breathed



MARINE MATTERS

Marine mollusc conservation is being kept to a separate page. It is a rather different issue as there is less immediate concern about species extinction. The main problem is sustainable management of economically valuable populations, which is more the province of fisheries departments and institutions. However, the IUCN Mollusc Specialist Group hopes to keep abreast of developments and, in particular, of those concerns which may not be dealt with by other agencies. One such concern is the marine curio trade.

Alison Kay carried out a feasibility study of a South Sea Island shell industry, but as reported at the Tübingen Congress, concluded that such an initiative should be discouraged.

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An overview of the international shell trade can be found in : Wood, E.M. & Wells, S.M. (1988) *The Marine Curio Trade; Conservation issues*. Marine Conservation Society. Available from Marine Conservation Society, 9, Gloucester Road, Ross-on Wye, Herefordshire HR9 5BU. Price £ 7.50 (within UK), £10.00 (overseas).

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THE SEA SHELL TRADE IN AUSTRALIA

There once was a Harpa named Ray
Who collected *Homo sapiens* by day
With the flesh off the bones
Smith looked just like Jones
When arranged in rows in a tray.

This poem, written by a shell collector, is the opening to a 1987 report on the shell trade in Australia by the Council of the Malacological Society of Australia. The chief investigator was Richard Willan, and the survey was instigated because the Australian National Parks and Wildlife Service were concerned by reports of significant depletion of local molluscan populations.

The report concluded that taxa most at risk from the specimen shell trade are those which are endemic, possess direct larval development, and are relatively rare. Under these criteria, the most threatened Australian taxa are all cowries of the subgenera *Notocypraea*, *Austrocypraea*, and *Zoila* (especially *Cypraea* (Z.) *rosselli*), volutes (especially *Amoria exoptanda*) and muricids (especially *Chicoreus rubiginosus* and *Pterynotus bednalli*). Dealing bans should apply to all these taxa until research has been conducted on their existing stocks and resilience to collection. In general, endemic cones and muricids are less vulnerable than cowries and volutes because

they have pelagic larvae.

The report makes the following recommendations :

1. That the recently introduced Federal legislation requiring every person wishing to send molluscs overseas to obtain a permit for that consignment from A.N.P.W.S. be recognized as futile and immediately rescinded.
2. Measures to control densities for populations of potentially over-exploitable molluscs (through collection for food, jewellery, specimen shell trade or other purposes) be vested with the states and monitored under state legislation.
3. A scheme be introduced wherein dealers (ie, persons selling shells within and beyond Australia to a value exceeding \$1000 per annum) and their suppliers (any racial group) be licenced. These dealers should be required to furnish an annual return summarizing their sales. As part of their licence, dealers should be required to show an understanding of molluscan biology and conservation measures as regards vulnerable species. A.N.P.W.S. could function, in consultation with the states, to produce a uniform dealer's licence.
4. Marine reserves (of irrevocable status) be designated in areas of :
 - a) Existing high densities of molluscs, especially vulnerable species.
 - b) Significant transitional zones of faunal overlap.
 - c) Parts of the coast or offshore islands that are biologically significant for other reasons.
And that no removal of marine life be permitted in these protected areas. Exceptions could be allowed in cases of study. (Such legislation has already been enacted in the state of Victoria).
5. *Charonia tritonis*, *Cassis cornuta* and all *Tridacna* species should be added to Schedule 1 (Part 11, Division 4) of the Wildlife Protection (Regulation of Exports and Imports) Act of 1982.
6. Dealing bans should apply to the following taxa of Australian endemic molluscs until management programmes have assessed their stocks and resilience to collection :
 - a) Cowries of the subgenus *Zoila* (especially *Cypraea* (*Z.*) *marginata* and *C.*(*Z.*) *rosselli*) wherever they occur;
 - b) All volutes (especially *Amoria exoptanda*) wherever they occur;
 - c) *Chicoreus rubiginosus* in Western Australia and *Pterynotus bednalli* in Western Australia and Northern Territory;
 - d) *Phasianotrochus eximius* throughout its range;
 - e) *Granata imbricata*, *Mitra* spp., *Cancellaria* spp. and *Argobuccinum bassi* in Victoria.
7. That, prior to development (or other alteration), the advice of people with specialised knowledge of molluscan species and habitats should be sought by individuals or organizations undertaking marine environmental impact surveys of an area in order to better ascertain the status, importance and vulnerability of molluscan populations in

that locality.
Further information from Dr Richard Willan, Dept. Zool,
University of Queensland, 4067 St Lucia, Brisbane, Australia.
In 1988, a report on 'Shell collecting on the Great Barrier
Reef' was produced for the Great Barrier Reef Marine Park
Authority, which also made a number of recommendations. In a
future issue of the newsletter we will provide an update and
information on whether these recommendations have been
implemented.

RECENT ARTICLES AND PUBLICATIONS ON MOLLUSC CONSERVATION

Cook. A. (1989), Slugs and snails. *Biologist* 36(4) : 183-188.

This contrasts the damage caused by slugs and snails as pests
with their economic value, and concludes :

"Slugs and snails are undoubted pests of crop production at
all levels - agriculture, horticulture, and domestic. It must
be remembered, however, that serious problems are caused by
relatively few species and these problems are frequently
cosmetic. Many species are key primary consumers and predators
in woodland, grassland, and hedgerow ecosystems in both
temperate and tropical regions. Further, the exploitation of
gastropods as sources both of food and of chemicals for
research into, and perhaps the treatment of, diseases has only
just begun; the preservation of diversity in this group of
animals must be a priority if we are to benefit to the full
from their potential."

Dr. Anthony Cook is at the University of Ulster at Coleraine,
N. Ireland, and works on the behaviour of large limacid slugs
and carnivorous snails, including *Euglandina*.

The following article was definitely NOT about conservation :

Dussart, G. (1989). Slugs and snails and scientists' tales. *New
Scientist* 22 July 1989 : 37-41.

But it stimulated the following letter, published in *New
Scientist* 26 Aug. 1989 from Andrew Jeffs in New Zealand who
runs the 'Save our Snails' Society :

"We are most upset by the thrust of Georges Dussart's article
'Slugs and snails and scientists' tales' (22 July), billed on
the cover as 'War of the snails'

The article left the reader feeling that in every corner of
the Earth humans are threatened by an uprising of hungry and
disease-ridden molluscs. An uprising that can be held back only
with toxic chemicals and by introducing 'new' predators.
Unfortunately, the truth is quite the opposite. In every corner
of the Earth hundreds of species of harmless molluscs are

threatened by an uprising of thoughtless humans. Ironically, often the greatest threats to these endangered slugs and snails are toxic chemicals or introduced species.

For example, here in New Zealand our society is battling to save several species of snail from the brink of extinction. One of the greatest threats to these animals are predatory mammals introduced to this country by English settlers.

Our greatest battle is convincing people that snails are worth saving. We believe that our rare snails are just as important as endangered pandas. The trouble is, however, that pandas are perceived as cute and cuddly while snails are slippery and slimy. Your article has done nothing to correct this public misconception.

Andrew Jeffs
Save Our Snails Society
Department of Zoology
University of Auckland
New Zealand



Pavan, M. (1986) **A European Cultural Revolution : The Council of Europe's 'Charter on Invertebrates'**. Council of Europe, Strasbourg. 51pp.

The Charter on Invertebrates was produced on the recommendation of the Council of Europe's Consulting Experts Group for Invertebrates. It states the various ways in which invertebrates are essential to mankind and recommends that member states of the Council of Europe take these principals into account in the development of management policies for the natural environment. It is also applicable to countries outside Europe but has so far been poorly publicised. Available from : Council of Europe, BP 431 R6 F-67006, Strasbourg, Cedex, France.

Collins, N.M. & Wells, S.M. (1987) **Invertebrates in need of special protection in Europe**. Nature and Environment Series No. 35. Council of Europe.

This includes a brief overview of European threatened molluscs and is available free from Council of Europe, as above.

CLAMLINES, the Giant Clam Research Group newsletter is compiled and distributed by the International Center for Living Aquatic Resources Management, South Pacific Office, P.O. Box 438, Honiara, Solomon Islands. It carries news about giant clam mariculture in particular but also items on clam research and other clam related issues.