

LEGAL REQUIREMENTS FOR THE WELFARE OF SHELLFISH

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Much has been researched and discussed concerning pain in non-human animals, and until recently it was supposed that cold-blooded creatures do not experience pain. Recent research has proved (as far as it is possible to prove subjective experience) that fish do feel pain, and many experiments have been carried out concerning invertebrates, such as shellfish. There is now substantial evidence that these animals will also respond to painful or adverse stimuli. Legal requirements, however, do not take into account the suffering of the shellfish; they are concerned entirely with keeping the animals in 'good condition' for human consumption.

While there are no real laws governing the welfare of shellfish, apart from lobster fishers not being allowed to catch 'berried' (egg-carrying female) lobsters, there is a great deal of advice from various sources on the careful handling, transport and storage of the animals. Since, unfortunately, there is an increasing demand for live lobsters, the leaflet Storage and care of live lobsters (1) explains the best methods of storing the creatures alive. It points out that the main advantage of storing lobsters live is that they can be maintained in 'prime condition'. It adds that this also 'permits flexibility of marketing and dispatch...' Ponds, tank systems, water quality, oxygen, water temperature and so on are gone into in great detail. Numbers of lobsters in a tank are dictated by weight of the animals to kg/m². The 'dos and don'ts' imply very great care of the animals, and it would be nice to think that all this concern was for the animal itself, rather than ensuring a rich market. Sadly, all this is to ensure profit. The main argument for keeping the lobsters in prime condition is therefore to attract top market prices. There is no mention of welfare.

The lobster belongs in a class of invertebrates called Crustacea, and includes marine and freshwater types such as the crayfish. The common wood-louse is also related. The leaflet explains that the two most important (sic) species of clawed lobster are the European lobster and the American lobster. Lobsters are mainly nocturnal and are carnivorous, eating a wide variety of marine animals. Like all crustacea, they shed their external skeleton periodically. This is called moulting. The so-called 'marketable size' is reached after between 26 and 30 moults (5-7 years).

In New South Wales, the selling of live lobsters to restaurant customers is illegal. However, in a report to the RSPCA by the International Food Institute of Queensland: Killing Rock Lobsters for Human Consumption (Brian Paterson, December, 1990), the gruesome description of one method of killing the lobster is too horrific to even contemplate. It would appear to be quite legal. It states:

'To kill the lobster, a blade or a pair of forceps ('tweezers') can be pushed through the eye socket or through the antennal socket and then used to quickly 'macerate' the tissue between the eyes and immediately beneath the pointed rostrum...'

It seems that although the animal will undergo nervous convulsions, stretching all its legs when the brain is destroyed, and the gill bailer will continue pumping, the animal is, according to the researcher, dead. The Conclusion of this report sums up by saying

that 'The procedure may indeed be gruesome when inadvertently viewed by other restaurant patrons but this perhaps requires an effort by the restaurant operator to consider the sensibilities of others and to forewarn patrons of the actual implications of serving seafood 'fresh from the tank'. Once again, the 'sensibilities' of other species are totally ignored. It should also be noted that the lobster has several 'brains' or ganglia running along its body, any one of which may be capable of experiencing pain. Destroying one does not destroy the entire nervous system. Therefore, it is far more likely that the nervous convulsions are expressing extreme pain.

There is always, in legal jargon, the term 'unnecessary suffering'. I cannot see that the use of animals for whatever reason should include *necessary* suffering. It is possible that if anyone were seen to pick up a live animal such as a crab or lobster and throw it across the room, this would constitute unnecessary suffering in the eyes of the law, and that person could be prosecuted. But for the rest, the animals can be boiled alive, have the flesh scraped out of them, have their brains mashed, be trapped, packed and transported miles, and generally be treated as commodities. The only legislation is designed to keep the animals in good condition for the purposes of human consumption.



Further directives on conservation are provided in the booklet General fisheries Technical Conservation Rules (2) which discuss minimum fish sizes which are allowed to be caught, including all the various shellfish. Again, this is not in order to care for the animals, but to make sure that there is a plentiful supply, with young and immature animals being allowed to grow and reproduce before being caught. Lobster and crawfish, edible crab, scallops, whelks and clam are all covered by legal catch size. Interestingly, minimum catch sizes vary from region to region. Presumably the creatures grow at different rates according to sea temperature, availability etc. In a leaflet entitled 'The Bounty of the Oceans, (3) under the heading 'Sustainable Management', there is a discussion on 'responsible fishing', a phrase used at the UN conference on Environment and Development (UNCED). It states 'Both scientific research and practical experience have long since taught us that if we take too large a harvest from the sea now, we will be able to harvest little or nothing in the future. The overall aim of the management of living marine resources is to ensure that we achieve the *maximum sustainable yield.*' (italics included). It goes on to state that there is a growing understanding of the importance of ensuring a sound scientific basis for all management decisions. But there is no mention of leaving the seas to sustain life without the interference of humans! Sound science should, in practice, imply that no management is needed, nor is it necessary to eat the sea's inhabitants.



While we are told that many communities are supported by the fishery industry, this is often not so much from need as tradition. For instance, in a letter from the Royal Norwegian Embassy in Washington, D.C., concerning whaling, I was told that the continuance of whaling was the 'preservation of cultural heritage'. The sale of lobsters, and shellfish in general, generates multi-billion dollar businesses, including

sales over the web. This is scarcely 'cultural heritage'. This is blatant capitalism. And it shouldn't be forgotten that the promotion of intensive prawn aquaculture in parts of the Third world has proved to be destructive to mangrove forest ecosystems. Large tracts of these mangroves are cut down to make way for the ponds in which to raise prawns. The export industry encourages this kind of exploitation. Meanwhile, the Third World remains poor and hungry.

Well, the affluent, shellfish eating public may like to know a little about the kinds of diseases prevalent in these 'fruits of the sea'! There is, for instance, the herpes virus in the oyster. Shellfish News No 10 (4) states:

'The Pacific oyster is the most important species of bivalve mollusc reared in the world and is of particular importance for European mariculture. Cultivation may be endangered by the occurrence of disease epizootics, especially of virus diseases', including herpes-like viruses. And there are other diseases, such as:

Paralytic shellfish Poisoning (PSP). When ingested by humans the effects can cause numbness of the mouth and fingertips. This is followed by impaired muscle co-ordination. Respiratory problems and paralysis can also occur and may be fatal.

Diarrhetic Shellfish Poisoning (DSP). This can cause diarrhoea, nausea, vomiting and abdominal pain.

Neurotoxic Shellfish Poisoning (NSP) (Not known in the UK)

Amnesic Shellfish Poisoning (ASP). Can cause vomiting, diarrhoea, abdominal cramps and loss of short-term memory, which may persist.

And it should be remembered that lobsters are sea-bottom walking animals and can ingest poisons such as heavy metals. Polycyclic aromatic hydrocarbons (PAH) such as benzo(a)pyrene are potent human carcinogens. Crustaceans have accumulated the smaller PAH such as naphthalene, phenanthrene and alkylated derivatives in areas affected by large oil spills.

To sum up the legal aspect: the only laws regarding shellfish are those which oversee the health of the animals to ensure their market value, yet even these are obviously unable to prevent disease from getting into the food chain; and when areas are closed to fishing for the animals because of the harmful algal blooms which are the cause of many of these diseases, the fisheries take great exception to such bans. In other words, it would appear that the welfare of humans figures just about as high on their agenda as the welfare of the animals.

Finally we come to dredging. From an article: Impacts and efficiency of scallop dredging on different soft substrates: (5) scientists found that on soft mud, dredges caught 51-56% of commercial-sized scallops. On firm sandy ground only 38-44% was of commercial size and more scallops were damaged. Common bycatch included oysters and crabs which were thrown overboard. Spider crabs had the greatest mortality and on firm sediments approximately 20% of scallops found by divers on the seabed were dead following dredging. It is now generally recognised that dredging can do ecological damage to the sea-bed and local marine life.

All in all, I say, leave shellfish in the sea!

1. Ministry of Agriculture, Fisheries and Food (MAFF), (now Department of Environment, Food & Rural Affairs (DEFRA), Lab. Leaflet No. 66 Directorate of Fisheries Research, Lowestoft, 1991. T.W. Beard & D. McGregor (p5)
2. DEFRA; the Scottish Executive Environment & Rural Affairs Dept.; Welsh Assembly Government, Agriculture & Rural Affairs Department and Department for Agriculture and Rural Development, N.I. (pp 14, 15, 16)
3. Royal Norwegian Ministry of Foreign Affairs, July 1994 (ISBN: 82-7177-379-8)
4. Nov. 2000 published by the Centre for the Environment, Fisheries & Aquaculture Science (a section of the former MAFF) (p18)
5. Canadian Journal of Fisheries and Aquatic Sciences, vol. 56, 539-550 (D.R. Currie and G.D. Parry, 1999)

