

Lobster factsheet

History and behaviour

Lobsters, as we think of them, are just one of many types of animal in the crustacean family. Other crustaceans include crayfish, shrimp and crabs. The lobster that is sold and eaten is largely the clawed lobster, member of the Nephropidae family of crustaceans [1]. These invertebrate animals existed on Earth up to 140 million years ago [2].

In place of a vertebra, the lobster has an exoskeleton, considered soft because it is flexible unlike a clam's exoskeleton. To grow, the lobster has to shed their shell. They will typically do this up to 25 times in the first 5-10 years – until adulthood – then once a year for males and once every two years for females. They will eat voraciously until a new exoskeleton can grow and increase their size by taking in water. It is possible that if allowed to live until their expected age they could reach lengths of three foot [3].

There is no current knowledge of how old lobsters can live until – scientists have claimed that they could potentially live up until 100 years old, or potentially indefinitely barring injury or death as their bodies show no sign of ageing other than size [4]. They live solitary in all oceans, on the rocky, sandy or muddy bottoms.

Mothers will carry their young for 9-12 months externally (attaching the eggs to her tail) [5]. Depending on breed, size and age, a mother lobster can produce between 3,000 to 100,000 eggs, but only 2 in every 50,000 (0.004 per cent) are expected to survive to adulthood [6].

Farming, catching and transporting

There is no legal age at which lobsters can legally be caught and killed for human consumption. Catches are deemed legal in the UK when they are 90mm long at the carapace (varies by country). Estimates put this size and weight at about 6-7 years old [7].

As with many fished animals, we have depleted the natural 'stock' levels found in the world's oceans. In parts of Asia, countries have taken to farming lobsters industrially because the coasts have been fished dry of lobsters. Lobsters bred in these farms are crammed in their thousands in bodies of water far smaller than their natural habitat [8]. It's no surprise that these solitary animals have been observed to turn to cannibalism when kept in captivity, a behaviour not common in the wild [9].

In the UK, lobsters are caught for consumption, mainly using traps – metal cages which lure them in and trap them inside. Many traps get lost, leaving the lobsters inside to starve, turn to cannibalism or drift ashore. It is unclear whether imports come from caught lobsters or those bred in aquaculture [10], but some are transported live from as far away as Canada [11].

Transportation and sale

Out of the water, they completely lose their ability of fight or flight. To escape predators or danger, lobsters use the caridoid escape reaction (common among crayfish, krill and shrimp as well), where they flex their abdominal muscles to bring their tail up and propel them backwards [12]. And once caught, their claws are kept closed using an elastic band or tape to stop them from injuring each

other. This is a major frustration of natural instincts.

Once they have their claws taped, they are transported in crates packed closely together. They are sometimes 'put on ice' to make them easier to transport and keep them 'fresher' or alive for longer.

Death

There are two ways in which it is most common for lobsters to be killed. The first is by boiling alive. The second is by slicing them down the middle with a knife whilst alive and fully conscious.

Some chefs misguidedly try to kill lobsters by stabbing them through the head before cutting or boiling. However, lobsters don't have a central cerebral cortex like humans, and instead have several neural clusters called ganglia. There are 3 in the head, and clusters located with all vital organs – therefore meaning that stabbing them in the head is not guaranteed to kill them or even make them lose consciousness [13].

There has been research done which shows that lobsters and crustaceans learn to avoid exposure to pain – a clear indicator that they have the biological systems to experience pain [14]. However, they are still not included under the Animal Welfare Act as a protected animal – ie they have no legal protection at the time of slaughter. The only invertebrate sealife that is currently protected under any law is the octopus. As octopus' and crustaceans have many biological similarities, it makes little sense that one is protected when the other is not.

There has been a development in recent times with the introductions of the 'crustastun' – an electronic stunner for crustaceans which claims to stun them long enough for them to be killed whilst being insensible, a vast improvement on boiling where it can take 2-15 minutes to die whilst being conscious [15]. However, any death is sad, unnecessary and brutal.

It is, in fact, illegal to boil or cut open a lobster whilst alive in some places. In Reggio Emilia in Italy, there is a heavy fine of €495 for anybody caught doing so, on the grounds that it is causing unnecessary suffering [16]. It has also been illegal in the whole of New Zealand since 1999.

The solution

The first change to be made is to include in UK law protections for crustaceans, end the sale of live animals and regulate slaughter methods. Consumer actions, such as asking Makro to stop selling live animals, and contacting Defra and voicing our opposition, will let the Government and retailers know that tougher regulations need to be in place.

And whilst it is obvious that lobsters and other sea life suffer from pain, fear and distress, more needs to be done to recommend the improvement of current UK laws. It will also drastically increase the welfare regulation of these vital and feeling creatures, and make consumers and industry alike reflect on the suffering they are causing.

However, the easiest and best solution to end the suffering of lobsters, other crustaceans and any animal is to simply not eat them and go veggie.

References

- [1] <http://www.lobsters.org/tlcbio/biology1.html>
- [2] Dale Tshudy, W. Steven Donaldson, Christopher Collom, Rodney M. Feldmann & Carrie E. Schweitzer (2005). "*Hoploparia albertaensis*, a new species of clawed lobster (Nephropidae) from the Late Coniacan, shallow-marine Bad Heart Formation of northwestern Alberta, Canada". *Journal of Paleontology* **79** (5): 961–968. DOI:10.1666/0022-3360(2005)079[0961:HAANSO]2.0.CO;2.
- [3] <http://www.lobster.um.maine.edu/index.php?page=48>
- [4] John C. Guerin (2006). "Emerging area of aging research: long-lived animals with "negligible senescence"". *Annals of the New York Academy of Sciences* **1019** (1): 518–520. DOI:10.1196/annals.1297.096. PMID 15247078.
- [5] <http://www.nationallobsterhatchery.co.uk/education/lobster-biology.htm>
- [6] <http://www.factmonster.com/ipka/A0854908.html>
- [7] http://www.seafish.org/media/Publications/SeafishResponsibleSourcingGuide_CrabsLobsters.pdf
- [8] <http://library.enaca.org/AquacultureAsia/Articles/oct-dec-2010/2-relative-efficacies-of-lobsters.pdf>
- [9] <http://resources.metapress.com/pdf-preview.axd?code=h7937310511j0k27&size=largest>
- [10] <http://archive.defra.gov.uk/environment/business/products/roadmaps/documents/seafood-scp-haskoning.pdf>
- [11] http://makro.co.uk/public/site/makro-uk/get/documents/mcc_gb/Assets/Market%20movers/Fresh%20Market%20Newsletter%20wk11.pdf
- [12] Krasne, F.B.; Wine, J.J. (1987), "Evasion responses of the crayfish", *Aims and Methods in Neuroethology*: 10–45
- [13] David Foster Wallace (2005). "Consider the Lobster". *Consider the Lobster and Other Essays*. Little, Brown & Company.
- [14] Bob Elwood. "The evidence for pain in crustaceans". Queen's University Belfast.
- [15] <http://www.crustastun.com/science-research.html>
- [16] <http://www.telegraph.co.uk/news/worldnews/europe/italy/1456270/Italian-animal-rights-law-puts-lobster-off-the-menu.html>