



## ***STRAIGHT FROM HELL'S KITCHEN*** *The silent suffering of lobsters*

Lobsters' typical ordeal is a long one - hauled out of their natural deep-sea environment in a trap, claws bound, transported to stores and kept in freezing temperatures in a state of semi-consciousness.

### **Lobster facts**

Lobsters belong to the Crustacea class of invertebrate animals. Crustacea shed their hard skeletons at intervals in order to grow (known as moulting). Lobsters have a 'head' (carapace) containing the heart, digestive and sex organs - and a 'tail' (abdomen) containing the intestine and anus. The eye, mouth parts and brain (cerebral ganglion) are found beneath the carapace. Wild lobsters can live to be 100. They carry their young for 9 months.

Lobsters have highly developed systems of both smell and taste and use complicated signals to continually determine any changes in their home environment. They 'smell' chemicals in the water with their antennae and 'taste' with sensory hairs along their legs. Lobsters can produce and detect low-frequency sounds. The 'growl' of clawed

lobsters can be felt when they are pulled out of their natural habitat or tank. Spiny (American) lobsters 'rasp' during aggressive encounters, 'rattle' when they are secluded and 'pop' when they are out of shelter.

### **Lobsters have pain receptors**

Lobsters do not have a centralized brain area like mammals - instead they have large ganglia (a large cluster of nerve cells) above and below the mouth and smaller ganglia at each segment in the body. The Shellfish Network say, 'It is possible that the lobster feels pain at any one of these points.' Although lobsters do not have a cerebral cortex (the area of the brain that translates pain impulses into the sensation of pain), zoologists describe them as having complex nervous systems. Invertebrate zoologist Jaren Horsley Ph.D. has studied crustaceans for years and states that the lobster, 'has a sophisticated nervous system that, among other things, allows it to sense actions that will cause it harm... [Lobsters] can, I am sure, sense pain.' combination of previously tested substances, unless it is suspected that that particular combination will cause a toxic reaction.

## Trapping and captivity

Makro keep their lobsters in thermal cases with a small ice pack to 'reduce activity'. We have no way of knowing whether lobsters are suffering in this imposed torpid state. We do know, however, that induced hypothermia in other animals (reptiles, amphibians and fish) is not believed to reduce sensitivity to pain. So just because they are cooled down, this doesn't necessarily mean that they don't feel pain and they would probably still be alert to physical traumas.

Lobsters are caught in traps. Each year, thousands of traps go missing. If the trap is not fitted with a timed release mechanism, lobsters will simply be left to die from hunger, cannibalism or through being washed up on a beach. During transportation, lobsters are typically packed tightly together in tanks with their claws bound with elastic bands to prevent them from injuring each other.

## Boiled alive

The Shellfish Network say that when lobsters are placed into boiling water they 'behave wildly, whipping their tails and trying to escape'. Death can take anything from 15 seconds up to 7 minutes.

It is a myth that lobsters gradually fall unconscious if the water is slowly brought to the boil. Lobsters who have not first been transported or confined will shake, tremble, struggle and flip violently as the temperature is increased.

Lobsters who have become inactive due to prolonged periods of transportation or confinement may not react so obviously but this does not mean that they have become insensitive to pain.

## Slicing and freezing

The Universities Federation for Animal Welfare (UFAW) say that lobsters can be killed by using a

sharp knife to split the creature from head to tail down the mid line, cutting through the chain of nerve centres which run down the length of the lobster's body. They warn that, 'this needs practice'. This research however did not sufficiently examine the neurological responses that might have been present and indicative of pain and stress after the slicing. The animals could well have been conscious throughout the process.

Sometimes lobsters are frozen to unconsciousness before being killed. The Shellfish Network recommends 2 hours in a deep freeze with a temperature of minus 20 degrees C°. It warns that 'the freezing compartment of a refrigerator would not be cold enough' and that lobsters may regain consciousness if they are not boiled immediately after removal from the freezer. In its paper, *Lobster Biology, Physiology, Neurobiology*, The Lobster Conservancy points out that freezing will expose lobsters to an unpleasant, unnatural temperature and that death/loss of consciousness will not be immediate.

Evidence from studies on other ectotherms suggests that they do not become unconscious during hypothermia. Their reactions are slowed due to physiological alteration of cooling, and they may drift in an out of sleep but freezing is unlikely to render them unconscious like a drug. In any case the lobster would wake up abruptly when put into boiling water.

An electric stunning tank has been developed which allows lobsters to be electrically stunned before they are cooked. Only larger caterers are likely to purchase this equipment. The process of electro-stunning is probably inhumane, and there is little evidence that ectotherms experience anything more than a short term effect from this type of stunning. Their hearts regain normal beats later and they commonly recover.

Thanks to the Shellfish Network. For more information about lobsters, you can contact the Shellfish Network c/o Springside, Forest Road, East Horsley, Leatherhead, Surrey KT24 5AZ; tel/fax: 01483 282995

