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A REPORT TO THE FISHING INDUSTRY AND GENERAL PUBLIC ON
THE IDENTIFICATION OF AMBERGRIS - R.G. Ackman and P.M. Jangaard

This material is formed in the intestines of sperm whales when these become irritated or obstructed by squid beaks, etc.. While not as valuable as formerly it is in some demand and numerous samples of flotsam and jetsam are sent to public authorities each year in the hope that they may be ambergris. Much time and trouble could be saved for everybody, including the finder, if a little thought were given to comparison of the material with the description and tests outlined below.

Unfortunately, the chances of finding ambergris are much less than formerly owing to the excessive hunting of this particular whale for its oil. The chances of any particular material found on a beach being ambergris are further reduced when one thinks of the many man-made materials which are floating around the oceans as a result of loss from ships and discharge of waste from shore factories. Among materials which are often submitted as ambergris are such commonplace materials as fish eggs, lard and tallow, cooking fats, raw rubber, pitch, paint and varnish residues, seal blubber, foamed plastic insulation, etc.. Many of these are readily recognizable to the finder or someone among his friends. The public authorities will not usually positively identify a sample as ambergris in cases of doubt, but can usually tell if it is not ambergris, as can the finder, on considering some of the following characteristics.

Amount. Although finds exceeding one hundred pounds have been made, this would be rare. If the finder has less, has anyone else on the same shore found more?

Appearance. Ambergris may be waxy (compare paraffin wax) or dry and brittle. It may or may not show layers and/or pieces of squid beak when broken. It should melt in water just too hot for comfort but not be runny or a liquid at room temperature. It is most unlikely to have corners or contours from packing cases, barrels or drums.

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Colour. The colour may be grey-white, black, brown, yellow or a combination of these, but is never pure white like shortening.

Odour. The odour should be musky but not unpleasant, and not similar to rancid fat or butter. A small sample on a clean knife end should burn with a pale blue flame and have a similar odour to the raw material. A feeble rubber-like odour is possible, but not a strong burning rubber odour.

Will it Dissolve? Many household cleaning fluids such as carbon tetrachloride, or combustible fluids such as gasoline, methylated spirit, or rubbing alcohol will dissolve a considerable portion of good quality ambergris, although it would be rare for all of a sample to dissolve. If very little material dissolves after a time it is either ambergris of very poor quality or not ambergris.

Hot-wire Test. One of the best tests for ambergris is to heat a wire or paper clip in a match flame and stick it one-eighth of an inch into the sample. A dark resinous layer should form on the wire and may bubble slightly. The wire should be quickly withdrawn and touched with the finger; sticky strings should form. The cooled melted ambergris should shine like dark enamel.

Further Information. More detail is given by:

N.M. Carter, "Ambergris". Fisheries Research Board of Canada, Pacific Progress Reports, No. 26, pages 19-20 (1935).

D.K. Tressler and J. McW. Lemon, "Marine Products of Commerce", 2nd Edition (Reinhold Publishing Co., New York) pages 700-701, (1951).

A.D. Baynes-Cope, "Analyses of Samples of Ambergris", Nature, Vol. 193, pages 978-979 (1962).

P.J. Hardwick and E.Q. Laws, "The Identification of Ambergris", The Analyst, Vol. 76, pages 662-664, (1951).