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Of Whales and Whaling

The whaling industry is rapidly destroying the valuable natural resource on which its future depends.

Noel Simon

In recent years there has been increasing awareness of the need for wildlife and wild places. Man's preoccupation with problems of his own survival may have made him slightly more sympathetic toward the other animals with which he shares this planet. There is also perhaps a dawning realization that, while it is permissible to use the income derived from some of the things of beauty, interest, and value which are part of man's natural heritage, the capital must be handed down intact to future generations. Indicative of man's growing concern over the prodigal squandering of nature are a mirror and accompanying sign set up at the Bronx Zoo; the sign states, simply but emphatically, "You are looking at the most dangerous animal in the world. It alone of all the animals that ever lived can exterminate (and *has*) entire species. . . ."

The oceans of Antarctica sustain the largest animal the world has ever known—considerably larger than the most massive of the dinosaurs which dominated the Mesozoic era—and one which has earned a high place on the list of mammals in the service of man. An adult blue whale, up to 30 meters long and weighing perhaps as much as 160 tons (*1*), dwarfs any other animal in the whole of creation; even its newborn young are larger than a full-grown elephant and reputed to consume more than half a ton of milk a day. But it may not be long before the blue whale joins the dinosaurs in the museum of oblivion. The demise of the dinosaurs remains veiled in mystery and surmise, but there is no need to speculate on the reasons for the disappearance of the blue whale; the rapaciousness of man is wholly responsible. Seas and oceans comprise 70 percent of the earth's surface, and one would have thought this ample habitat allowed more than enough space for the whale's survival, but pursuit of the whale has been so persistent that nowhere on the face of the sea or in its uttermost depths, however remote or vast or forbidding, is there any longer true sanctuary beyond the reach of man's ruthless exploitation.

During the heyday of the old-time whaling industry, only the smaller whales, which could be pursued in open boats, were hunted. The speed and size of the large rorquals (the blue, fin, and humpback whales) rendered them safe, but in 1865 their natural immunity was lost through the invention of the harpoon gun and the development of the steam-powered catcher (*2*) as a vehicle for the new weapon. These inventions gave fresh impetus to a flagging industry but, at the same time, sealed the fate of the great rorquals, notably the blue whale, which is particularly valuable commercially since it yields about 140 barrels of oil, twice the yield of the fin whale.

Before 1904 whaling was almost entirely restricted to the Northern Hemisphere, and the Southern Hemisphere whale populations on the antarctic feeding grounds were free from human exploitation. Improved ocean-going catchers and the growing scarcity of whales in northern waters encouraged the industry to break new ground, and in 1904 the first ship started whaling from South Georgia in the South Atlantic. The commencement of deep-sea whaling in the Antarctic was followed by the development of new and increasingly efficient techniques. The factory ship, with a slipway built into the stern, up which whales could be winched for flensing on deck, greatly extended the radius of operations. Thenceforth expeditions could operate freely throughout the oceans of Antarctica, wherever whales were to be found, the covey of catchers in combination with the factory ship making virtually a miniature task force, the whale oil being transferred in bulk to attendant tankers for transportation to the home base.

Postwar refinements include the use of helicopters for spotting whales, sonar devices developed from wartime asdic, more efficient harpoons (both explosive and electric-powered), and the modern factory ship, which processes the carcass of a fin whale in half an hour (disposing of a blue whale takes a

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little longer). Every part of the animal is utilized; the products from the various species include edible oil, sperm oil (which is not edible but has many industrial uses), frozen meat for human and animal consumption, meat meal, bone meal, vitamin-rich liver oil, spermaceti, ambergris, and pharmaceuticals such as hormone extracts.

International Whaling Commission

At first antarctic whaling was unrestricted and catches were immense. By the 1930's it was apparent that certain species, especially the blue and the humpback whales, were being overexploited, and that some form of restriction was necessary if the antarctic whaling industry was not to go the way of the northern fisheries. Shortly before World War II the British, German, and Norwegian governments agreed to certain limitations being placed on antarctic whaling, and in 1946 the International Whaling Convention was signed and the International Whaling Commission was established.

The commission is empowered to regulate the whale catch and thus to ensure the effective conservation of the world's whale stocks. To this end it has introduced regulations specifying the species which may and those which may not be caught, the length of the hunting season (this varies for different species), the areas in which fleets may operate, measures for protecting nursing females and their young, and the size below which mature whales are protected.

The commission also sets a limit on the total number of whales which may be taken in any season (*3*). The basis on which the annual permissible total is calculated is the "blue whale unit formula" [1 blue whale unit (b.w.u.) = 1 blue, or 2 fin, or 2½ humpback, or 6 sei whales]. Up to 1953 this total was fixed at 16,000 b.w.u., but reductions have had to be made in subsequent years, and the limit for the 1963–64 season was 10,000 b.w.u.

Because of the apparent deterioration in the whaling situation, the International Whaling Commission decided in 1960 to appoint a special group to undertake a study "on the condition of the Antarctic whale stocks, on the level of sustainable yield that can be supported by these stocks and on any conservation measures that would increase this sustainable yield."

Committee of Scientists

Following a comprehensive survey, this "Committee of Three Scientists" (*3a*) issued a strongly worded report based on accumulated scientific evidence and made a number of far-reaching proposals designed to alleviate the critical situation which had by then developed. The report "confirmed the drastic need for action" and "leaves no doubt that the stocks have been overexploited and a programme of conservation should be initiated if the industry is to be maintained on a continuing basis."

The study indicated that the blue and the humpback whales "are in serious danger of extermination unless adequate protective measures are taken immediately. Fin whale stocks have been seriously depleted and are far below the levels of maximum sustainable yield." The committee therefore recommended, among other proposals, that there be a complete cessation of catching of blue whales "for a considerable number of years," that the humpback be fully protected throughout the Southern Hemisphere, and "that the quota of fin whale catches be reduced to 7,000 or less" in order to allow stocks to recover.

The committee concluded that the "absolute upper estimate of 1953/54 stock is about 14 to 15 thousand blue whales, and a likely value is about 10 thousand or less," and that the 1961–62 population (apart from pygmy blue whales) was between 930 and 2790. "By 1963 the stock will be reduced below even the present level, probably to between 650 and 1,950 whales—which is a level at which there must be a distinct risk of complete extinction. . . ."

In setting up the Committee of Three Scientists the International Whaling Commission had made a commitment to bring its regulations into line with the scientific evidence by July 1964. It was therefore confidently expected that the meeting of the International Whaling Commission, held at Sandefjord, Norway, in June 1964, would unhesitatingly accept the scientific advice of a committee which the commission had itself appointed, and would thereby resolve the critical situation which had arisen. Unfortunately these hopes were not fully realized, and the commitment was not honored.

The Sandefjord meeting agreed that the blue whale and the humpback should be fully protected throughout the antarctic, but in September 1964 Japan exercised her right to lodge an objection within 90 days, and this decision was therefore smothered almost at birth. It is true that protection is to continue in the North Atlantic (although not in the North Pacific) for a further 5-year period (*4*), but it is an ironic circumstance that this belated and inadequate protection has been accorded only when both species have been so drastically reduced in numbers that, for all practical purposes, they are already regarded commercially as extinct. Blue and humpbacked whales are no longer of any commercial importance because both have been exploited to the brink of extermination, and the whaling industry can therefore now afford to tolerate their protection.

D. B. Finn of Canada who, until early last year, was head of the U.N. Food and Agriculture Organization's Fisheries Division, states: "[the blue whale] has all but vanished from the seas because the nations that hunted it were unable to agree on a common and enlightened conservation policy for the world's whale resources. It used to be said that no-one owned the oceans beyond the territorial waters. In law this was called *res nullius*. The blue whale was a victim of *res nullius*. The whales were there, nobody owned them, and everyone was free to hunt. True a treaty was drawn up among whaling nations, but it was a bad one for the simple reason that it did not work. In the future, if the sea's natural resources are to be intelligently protected, the *res nullius* concept must be replaced by that of *res communis*—that the oceans belong to all rather than to none."

With the example of the blue whale before it, one would have supposed the industry would have recognized the need to prevent a similar catastrophe befalling any other species. One would have thought it very much in the industry's own interests to ensure the continued existence of the fin whale, which has become the most important commercial species and furnishes the bulk of the antarctic whale catch. Further depletion of this species would undoubtedly result in disruption of most of the whaling industry. Therefore the requirements of the industry would presumably best be served by introduction of a policy designed to conserve the species on a basis of sustained yield.

Although the permissible quota for the 1963–64 season, as set by the commission, was reduced from the 1962–63

quota by one-third, from 15,000 to 10,000 b.w.u., the actual catch amounted to only 8413 b.w.u. The three scientific advisers had estimated that filling of the reduced quota would require a kill of 16,000 fin whales together with the anticipated catch of other species, but had concluded that the existing fleets, however hard they tried, would be unable to take more than 14,000 fin whales, a prediction which was borne out when just under 14,000 were taken during the season. The significance of this figure is at once apparent when it is related to previous seasonal catches. Of the 27,176 rorquals taken during the 1955–56 season, 25,289 were fin whales. By 1962–63 the figure had dropped to 18,668. This decline occurred despite a steady seasonal increase both in the number of catchers and in the efficiency and hunting capacity of the whaling fleets.

The decline of the fin whale in recent years is shown by the following statistics for estimated average population size, published by the International Whaling Commission: 1955–56, 110,000; 1956–57, 101,700; 1957–58, 89,000; 1958–59, 88,600; 1959–60, 65,700; 1960–61, 59,700; 1961–62, 45,300; 1962–63, 40,000.

In the light of this situation the commission's scientific advisers agreed that the 1964–65 season's catch should be limited to 4000 b.w.u., this figure being progressed to 3000 b.w.u. in 1965–66 and 2000 b.w.u. in the 1966–67 season; the figure of 2000 b.w.u. would have permitted recovery of the whale stocks to commence and would therefore have been acceptable as a kind of conservation measure. This proposal did not secure the three-fourths majority necessary for its acceptance. The four (5) countries that engage in pelagic whaling in the Antarctic later reached agreement outside the commission to limit the 1964–65 season's catch to 8000 b.w.u., which was double the quota accepted by the scientists; a further serious reduction of fin whale stocks therefore became inevitable.

Recent Catches

Actual catches for the 1964–65 season fell short of the unofficial target by almost 1000 b.w.u., substantiating the scientific advisers' prediction not only that whale stocks were so low that a quota at that level "could not be considered either as a restraint or as a conservation measure in any sense," but also that the available whaling fleets could not secure such a catch, even on a short-term basis.

Seven thousand fin whales were taken, the total stock of this species being thereby reduced to an estimated 34,000 to 35,000, which is about a third of the number estimated to have existed less than 10 years ago.

The statistics also show that the whalers concentrated much more effort on catching the sei whale than they had done in any previous season. This shift can be attributed in part to the scarcity of other species, but it is also accounted for by the increasing value of whale meat, meat extract, and other products. The catch of sei whales was four times that of the preceding year, 20,000 being taken from an estimated total population of 55,000.

No species of whale can long withstand this rate of exploitation, and it is clear that, unless a realistic catch limit is introduced and enforced, the sei could within a few years be reduced to the same precarious status as the blue whale.

Stringent reduction of the antarctic whale catch during the next few years would allow stocks to recover and thereby pave the way for a progressive expansion of the industry. At the Sandefjord meeting the proposal for such a reduction was supported by all but four of the 14 participating countries (the four were Japan, the U.S.S.R., the Netherlands, and Norway), but, since the commission has no legal powers of enforcement, the minority view prevailed. A situation had in fact arisen in which nine commissioners, backed by their own governments, failed to obtain the agreement of the antarctic whaling countries to reduce the quota of catches in accordance with scientific advice and in accordance with the industry's own long-term interests.

The governments whose representatives at Sandefjord voted to give effect to the scientists' recommendations regarded the failure to take effective action as a threat to other international agreements for the conservation and rational use of marine fisheries resources. These governments indicated that continuing failure to reach agreement through the commission might compel them to seek a solution through the United Nations, where many more countries not at present engaged in whaling would make evident their opposition to the destruction of a valuable food resource through unrestricted predation by a few.

Special Meeting

Mounting dissatisfaction over the failure of the Sandefjord meeting led to the calling of the first Special Meeting ever to be convened by the International Whaling Commission; this was held in London from 3 to 6 May 1965. Its purpose was to reach agreement on an overall maximum quota for the antarctic pelagic-whaling fleets for the 1965–66 season.

Scientific evidence was presented to show that only if the total catch for 1965–66 were held to less than 2500 b.w.u. (made up of not more than 4000 fin and 3000 sei whales) could it be ensured that stocks of fin and sei would not be further depleted. The basis for discussion was a report by a group of scientists, and submitted by FAO, of analyses of data supplied especially by the Bureau of International Whaling Statistics, the commission having made no arrangements for appraisal of the recent scientific data. This report, together with FAO's consistent refusal to be associated with a policy which could ultimately lead to destruction of the whale resources, were factors of the greatest importance to the meeting.

There was unanimity among the countries represented at the meeting as to the desirability of reducing catches to within the sustainable yield and of ultimately reducing them still further, so that whale stocks could increase to the point where maximum sustainable yields could be obtained.

Four separate proposals, submitted by the representatives of the U.S.S.R., Norway, Japan, and the United States, respectively, were examined by a special committee whose essential purpose it was to obtain the agreement of the three pelagic-whaling countries to any one of the proposals, and preferably to the one giving the highest degree of protection to the whales.

This committee failed to reach agreement in spite of a last-minute attempt by the U.S.S.R. and the United States, who put forward virtually identical amendments proposing adoption of a quota of 4000 b.w.u. for the 1965–66 season.

The amendments contained the proviso that each member of the commission bind himself to recommend to his own government that it should agree to further reductions in the 1966–67 and 1967–68 quotas—reductions designed to ensure that the 1967–68 quota would be lower than the sustainable

yield of both fin and sei stocks at that time.

The Japanese finally offered to accept the U.S.S.R.–U.S. proposal provided the 1965–66 quota was raised to 4500 b.w.u. The Canadian representative and others attempted to have the clause concerning further reduction in quotas defined more precisely and made more binding, but their efforts were unavailing. The Japanese amendment was put to the vote and carried.

Objections

The official press release issued by the International Whaling Commission after the meeting states that "there is thus for the first time a plan for the effective conservation of whales in the Antarctic," but this optimistic assertion appears to be premature, since the agreement is open to the following objections.

1) The 1965–66 quota of 4500 b.w.u. is almost twice as high as the 2500 b.w.u. which the scientific advisers regard as the maximum for the 1965–66 season if stocks of fin and sei are not to be still further depleted.

2) The wording of the statement concerning the reduction of quotas for the two subsequent seasons to within the sustainable yield of existing stocks is very imprecise, and the Japanese delegate was notably evasive in giving his interpretation of it.

3) The intention, implicit in the agreement, is that the reduction should be to the level which would permit basic whale stocks to increase, but this essential requirement is not clearly stated.

4) The quota applies only to pelagic whaling and takes no account of the catch from shore stations. The 500 b.w.u. taken from South Georgia, for example, during the 1964–65 season is a significant amount in relation to the overall pelagic catch.

5) The quota continues to be expressed in blue whale units, a procedure which gives inadequate control over the killing of individual species. Thus, in theory, the entire quota could be taken in either fin or sei, with disastrous results to either of those species.

Proposed Measures

Therefore, although it is true that the agreement recognizes the need to conserve whale stocks in the Antarctic, this need is unlikely to be met unless further measures, along the following lines, are adopted:

1) The proposal to reduce the catch to the level of sustainable yield by 1967–68 should be unequivocally stated as part of a firm policy directive by the commission; indeed, the quota for that season should be set sufficiently *below* the sustainable yield to allow some significant increase of whale stocks to begin.

2) The system of basing quotas on the blue-whale-unit formula should be abandoned, and quotas for each species should be laid down.

3) Quotas should cover both shore-station and pelagic catches.

4) Both the blue whale and the pygmy blue whale should be specifically accorded absolute protection throughout their entire range. (At the Sandefjord Meeting the commission recommended the complete prohibition of the capture of blue whales in the Antarctic, but the pelagic whaling countries subsequently objected to this decision so it is now null and void.)

5) Urgent steps should be taken to prevent the whaling fleets that cannot, because of reduced quotas, be employed in the Antarctic from destroying stocks elsewhere, as in the North Pacific.

6) The International Observer Scheme (*6*), on which the commission has already agreed in principle, should be implemented without further delay.

Conclusion

Unless there is firm agreement along these lines the prospect will continue to be as disturbing to conservationists as it must presumably be to some sections of the whaling industry. In the words of S. J. Holt, of FAO, one of the three scientific advisers, "cut-throat competition, eventual extermination of species and the death of the Antarctic whaling industry could result unless last-ditch agreement is reached in the Antarctic whaling crisis—stocks are now so small that only the most drastic action can save the whaling industry from complete collapse within a very few years, after which it will be generations before the residual stocks recover to a productive level. Some of them may never recover."

Holt has stated that the maximum sustainable yield of antarctic whales would be slightly more than 1.5 million tons annually after the stocks had been allowed to build up; this is perhaps two-thirds of the potential world whale catch. At current prices this would be worth some $200 million each year. It seems almost incomprehensible that a sustainable natural resource of this magnitude should be allowed to become virtually extinguished and a valuable industry brought to a standstill because a minority of its members are motivated by what has been aptly termed a "plunder now, pay later" policy.

Rational utilization of this resource is perfectly legitimate, but exploitation to the point of extermination is as inexcusable as it is shortsighted. Quite apart from ethical considerations, total destruction of whale stocks does not make very good economic sense. Yet, not only has international agreement so far failed to prevent irresponsible overexploitation of this valuable and irreplaceable natural resource, but the whaling industry itself has entirely failed to look to the future and to plan long-term operations in the light of the scientific evidence available to it. Adoption by the commission of the recommendations of its own scientific advisers would involve no surrender to sentiment but would provide a blueprint both for ensuring the continuance of whale stocks and for securing the whaling industry's own means of existence.

The unrestricted slaughter which resulted in the near-extermination of whales in the Northern Hemisphere during the last century could be in part excused on grounds of ignorance. That excuse is no longer valid, yet an identical result is now likely to be achieved quite deliberately—even, apparently, at the cost of self-destruction of the industry.

Notes

1. *Brachiosaurus*, a giant even among dinosaurs, weighed only an estimated 50 tons.
2. A modern whaling fleet consists of a factory ship working in conjunction with a varying number of powered vessels known as catchers, each of which mounts a harpoon gun and is designed for the pursuit and slaughter of whales.
3. Whaling is permitted for only a limited period each year; the season starts late in one year and finishes early in the next.

3a. The committee has more recently been expanded to a Committee of Four.

4. Protection in the North Atlantic was introduced by the International Whaling Commission in 1960 for an initial period of 5 years. The Sandefjord meeting agreed that this protection should be extended for a further 5-year period, starting in 1965.
5. At the time of the Sandefjord meeting there were four pelagic-whaling countries, but since then the Netherlands has sold her one remaining fleet to Japan. Thus there are now only three—Japan, the U.S.S.R., and Norway.
6. Under the International Observer Scheme, an officially appointed foreign observer would be attached to each whaling fleet to ensure that all ships engaged in whaling conform to the regulations.