SMALL-TYPE COASTAL WHALING IN JAPAN

DEVELOPMENT OF JAPANESE WHALING

Origins of LTCW, STCW and PELAGIC WHALING

Early Organisation

Passive whaling (the utilisation of dead or dying whales) has been practiced in Japan since prehistoric times, while the active hunting of small cetaceans probably dates from the Jomon Period (10,000 - 300 B.C.), as suggested by finds of hand harpoons and porpoise skulls in burial mounds.

Organised whaling using boats, hand harpoons and land stations began in the 16th century and soon came to assume great importance in the economies of Wakayama, Shikoku, northern Kyushu, and the Japan Sea coast of Yamaguchi. The preferred species were gray and right whales, but in Katsuyama, Chiba Prefecture, a tradition began in the 17th century of catching Baird's beaked whales.

Then, in 1675, a hunting method was begun in Taiji in which groups of up to 300 people herded whales into nets and harpooned them. Species caught were gray whales, right whales, humpbacks, fin whales and probably some minkes. The net method spread throughout the southwest of the country and would dominate Japanese whaling until the end of the 19th century. Only in the Baird's beaked whale fishery in Chiba, and the pilot whale fishery in Taiji, did hand harpoons continue to be used until the 20th century.

Western Competition

In 1820, Western whalers discovered the rich hunting grounds between Hawaii and Japan and soon hundreds of foreign vessels were operating in Japanese waters. Their arrival coincided with, and probably caused, a sharp fall in catches by the locals, as the whales were being caught before they reached coastal waters and came within reach of the small Japanese rowing boats.

Many whaling groups encountered serious financial difficulty during this period, and it became clear they would have to modernise if they were to survive. After experimenting unsuccessfully with techniques found in American whaling, from the end of the 19th century they began to adopt the "Norwegian method" using steam ships equipped with grenade harpoon guns. In time, this method would give rise to three distinct whaling regimes — LTCW, STCW and pelagic whal-

ing — all of which were firmly established (if not yet defined by the authorities) by the outbreak of the Pacific War.

Large-Type Coastal Whaling

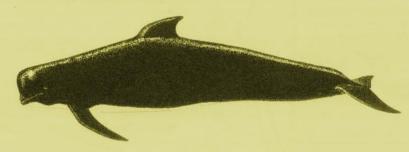
The Norwegian method was first used in Japan for LTCW, in about 1897. It was so effective that within a few years more than 20 new whaling companies had been established. Most of these were registered in the old whaling communities of the southwest from

south (1919 and 1922, respectively). As the whaling grounds now spanned from $25 \sim 50^{\circ}$ N, whalers could operate all year round, spending winters in the south, and summers in the north.

During the Pacific War LTCW provided much-needed food, but by the end of the war Japan had lost 95% of her whaling vessel tonnage (including all of the Antarctic fleets) and more than half her pre-war whaling grounds — Korea, Taiwan and the Kuril Islands. However, the LTCW fleet recovered quickly and by 1947 had attained its pre-war level. The number of catcher boats peaked at 42



Baird's beaked whale (top) and pilot whale, the only two species now being taken by Japan's STCW.



where the crews originated, but they operated all around Japan and thus contributed to the spread of whaling to new catching grounds and to new coastal communities. Among the whaling stations that were established in this period were those in Ayukawa (1906) and Abashiri (1915).

Because of the rate at which the industry was expanding, in 1909 the government decided to introduce regulations with the aims of securing resources for the future and preventing over-capitalisation. Operators' licences were introduced, the number being limited to 30 (cut to 25 in 1934), and new regulations covered the species that could be hunted, and the seasons and areas in which they could be caught. It was through such steps that modern coastal whaling for large whales, or LTCW, became established in Japan.

The pre-war period was also marked by an expansion of near-seas whaling grounds to include the Kuril Islands to the north (from 1913), and Taiwan and the Bonin Islands to the in 1952, and then remained between 31 and 37 until 1960, when a steady decline began.

Another turning point for LTCW came when the 1946 Washington Convention limited whaling to the sixmonth period May to October. Since most whales spent these months in northern waters, the convention meant the end for most whaling in southwest Japan. Thus of the 20 land stations operating in the 1950s, most were to be found in the northeast of Japan.

The LTCW fishery took its last blue whale in 1964, its last humpback in 1965, and its last fin whale in 1975, but the total number of whales taken in increased until 1968, due to increasing catches of sperm whales. Catches declined steadily thereafter until the last sperm whale was taken in 1987. In that year three companies were operating a total of five catchers ranging from 400 to 600 tons, and took 200 sperm whales and 317 Bryde's whales. All land stations were then closed, the ships were decommissioned, and the whalers were laid off.

Pelagic Whaling

The first Japanese fleet went to the Antarctic in 1934, 30 years after Norway began whaling from South Georgia. Though late in starting, Japan soon caught up with the leading pelagic whaling nations of Norway and Britain, and by 1938 had six fleets in the Antarctic. In 1940 Japan sent her first fleet to the North Pacific.

Pelagic whaling opened up new possibilities for the unemployed whalers of southwest Japan, and a high proportion of the crews thus came from Kyushu and Wakayama Prefecture. Many crew members also came from Ayukawa and Kugunari in Miyagi Prefecture, but traced their roots to southwest Japan. Pelagic whaling thus came to play a vital role in sustaining the whaling culture of many of Japan's whaling communities.

In the late 1930s, pelagic whaling produced more than all other types of whaling combined. Operations were suspended during the war, but in 1946 Japan was faced with severe food shortages, so the Occupation Forces permitted the resumption of Antarctic whaling. The first post-war fleet was sent to the North Pacific in 1952.

In 1947 about 47% of the total animal protein consumed in Japan came from whale meat, and this percentage was still as high as 23% in 1964. The peak in pelagic whaling came in 1962, when production reached 370,000 tonnes of oil and meat. The last fleet went to the Antarctic in 1986-87, and amassed 9,955 tonnes of products.

Small-Type Coastal Whaling

The third category of whaling practiced in Japan — STCW — has a far longer history than LTCW or pelagic whaling, but is not as well understood.

For centuries, Japanese have driven schools of small cetaceans into bays by lowering nets behind them and banging and shouting. But though dolphins and porpoises are still occasionally caught using nets, the roots of modern-day STCW lie in the hand harpoon method.

Until recent times some communities still used hand harpoons to catch pilot whales and Baird's beaked whales, most notably in Taiji and Katsuyama, but with the modernisation of LTCW at the turn of the century, it was only a matter of time before these whalers too adopted steam boats and harpoon guns. The outcome of this process was the development of a new kind of boat and harpoon, which proved efficient for catching not just pilot and Baird's beaked whales, but minkes as well.

The introduction of the semi-diesel engine and the invention of a fivebarrelled harpoon gun by a Taiji man, Kenzo Maeda, in 1904 led to traditional boats being outfitted with these innovations, and pilot whaling became a viable industry. On the Boso Peninsula, meanwhile, Baird's beaked whales began to be caught using the Norwegian method. By the early 1910s, therefore, two forms of STCW using harpoon guns had emerged, one in Taiji and one on the Boso Peninsula.

But the catcher boat for hunting minkes had yet to be developed. This kind of boat, which would eventually replace the boats used for pilot and Baird's beaked whales, was developed in Ayukawa in the early 1930s. A 7-ton pilot whaling vessel was fitted with a 26-mm Norwegian harpoon gun, and after firing one shot from the Maeda gun, the Norwegian gun was used for a second, fatal, shot. Later these were replaced with a more powerful Norwegian gun that was so effective it led to the general adoption of 15~20-ton boats to catch minke and Baird's beaked whales.

During the war, with the suspension of pelagic whaling, STCW assumed new importance and by 1947 the fleet had grown to 83 vessels. From that year, therefore, the government decided to regulate STCW by issuing licences, defining the species that could be caught, restricting the size of boats to 30 tons (raised to 47.99 in 1964), and specifying ports at which catches could be landed (as a means of limiting how far they could travel)

In 1949 Ayukawans began hunting Baird's beaked whales for the first time. Though small boats had long been used to catch this species off the

Boso Peninsula, it had been ignored off Ayukawa. But the catch yielded a lot of oil which was in high demand at that time, and Baird's beaked whaling thereafter became an important part of STCW in both Ayukawa and Hokkaido.

The pelagic and LTCW companies, meanwhile, had been recovering their pre-war strength, and soon STCW operators were finding it hard to compete. In 1951 there were 68 boats, but by 1954 there were just 54. The government then offered to convert several STCW licences for one licence to operate a large vessel of equivalent tonnage, and thus the number fell further. By 1961 there were just 23 STCW boats, and by 1967 just 10. From 1969 to the present the number has fluctuated between seven and nine

STCW Today

The STCW fishery is regulated by the national government and is licenced to take three species: the minke whale,

Baird's beaked whale and pilot whale. The minke whale comes under the mandate of the IWC which accordingly sets quotas, while for the other two species quotas are set by the Japanese government.

The number of whales taken in the STCW fishery fluctuated around 1,000 from 1957 to 1967, but then began a gradual decline. The last season of minke whaling was in 1987, when the quota was 311 and 304 were actually taken. In that same season, the quotas for Baird's beaked whales and pilot whales were 40 and 50, respectively, but following the minke whaling ban these were increased to 54 and 100. However, the quotas of pilot whales are not being filled because they are too low to make it economically feasible for boat operators to hire crews. In 1991, for example, just 59 pilot whales were taken, and in 1992, 80.

UKUSHIMA

Population: Currently there are 4,600 residents divided between two villages. This figure represents severe depopulation from a peak of 13,000 in 1960, when Antarctic whaling was at its zenith.

Location/Accessibility: A small island in the Goto Archipelago, Nagasaki Prefecture. The only connection with the mainland is by ferry to the port of Sasebo, with the ferry travelling down the island chain one day and back the next. The journey to Sasebo can take up to 5 hrs, and from Sasebo to the prefectural capital of Nagasaki takes a further 2 hrs by train.

Whaling history: Whaling has been practiced throughout the Goto Archipelago for centuries. As the land stations of the whaling industry moved northwards, Ukushima managed to continue its whaling traditions by sending its inhabitants to them and to the Antarctic. In the 1992–93 season, 15 men born in Ukushima participated in a government-licenced research program on whales in the Antarctic.

Other activities: Fishing, mainly abalone.

ARIKAWA

Population: Like Ukushima, Arikawa depended heavily on Antarctic whaling for jobs. From a population of 13,280 in 1960, the figure has dropped to 8,330 today.

Location/Accessibility: Goto Archipelago, Nagasaki Prefecture. Daily flights go to Fukuoka and Nagasaki, but as planes take only 8 passengers and 30% of flights are cancelled due to bad weather, most people travel by ferry. Up to 7 hrs by ferry to Sasebo, then 2 hrs by train to the prefectural capital, Nagasaki. Whaling history: The first whaling group was established here in the 1590s, making Arikawa one of Japan's oldest whaling centres. No land station has operated here since the 1930s, but until the Pacific War many locals continued to whale from stations further north and in the Japanese dominions of Korea, Taiwan and the Kuril Islands. Whalers from Arikawa have also historically formed a significant part of the Antarctic workforce, and in 1960 made up almost one-tenth of the more than 10,000 crew who travelled south. At that time, about a quarter of all households had at least one member engaged in whaling. In the 1992-93 season, just two men born in Arikawa managed to secure jobs in a government-licenced research program on whales in the Antarctic.

Whaling has had an important influence on the rituals and beliefs of Arikawa, and many religious observances are directly related to whaling activities. The moratorium has dealt a severe blow to these rituals and beliefs.

Other activities: A few fish-curing plants; some noodle making.



Population: 4,150. In the middle of this century, Taiji enjoyed prosperity from Antarctic whaling and LTCW. However, the decline of the industry has seriously affected the economy, and employment opportunities for young people have become scarce. Though the total population has declined only gradually in recent decades, the average age is now abnormally high at 43.6. Location/Accessibility: Pacific coast of Wakayama Prefecture, backed by low mountain ranges with almost no agricultural land. 20 mins by car to nearest station, 2 hrs by train to prefectural capital, Wakayama.

Whaling history: Active whaling here goes back 800 years, and organised large-scale whaling in Japan began here in 1606, for humpbacks and right whales. For more than three centuries, whaling has been Taiji's most important industry and the focal point of the population's cultural identity.

Taiji whalers quickly became involved in modern whaling and travelled all over Japan to work at new land stations like Ayukawa, and also to the Antarctic. Locally they have continued to catch pilot whales and dolphins, and until the moratorium Taiji boats also travelled northwards to catch minke whales. Taiji currently has licences for two STCW boats which in 1992 caught 28 pilot whales.

More than any other community involved in whaling, Taiji relied on revenues from this source. In 1966 whalers contributed two-thirds of the town's total tax revenues and the town had no debts. In 1984, only 4% of the tax revenues were paid by whalers and the town had more than ¥1 billion in debts. Currently there are just 11 people employed full time by STCW, nine as crew members and two as flensers.

Other activities: Taiji has made great efforts since the 1960s to promote tourism as a whaling town. There is a whale museum, a beached Antarctic catcher boat, statues of dolphins and a whaling festival. However, the major drawbacks are that Taiji is far from urban centres, and has little actual whaling to give its image substance.



ABASHIRI

Population: 43,000; stable.

Location/Accessibility: On Okhotsk Sea coast, northeast Hokkaido. 5 hrs by train from prefectural capital, Sapporo; daily direct flights to Tokyo and Osaka. Whaling history: Attempts to establish whaling groups in Hokkaido using nets date back to 1802, and continued throughout the 19th century, but met with limited success. Following the adoption in Japan of the Norwegian method, an LTCW station was built in Abashiri in 1915 (LTCW finished here in 1959). In common with other northern whaling communities, at first most of the whalers came just for the season from old whaling communities in Shikoku and Kyushu, but later they settled here and started families.

In the post-war period whaling was practiced throughout Hokkaido to supply much-needed food, and it was at this time that STCW began in Abashiri, with crews recruited from Arikawa. But most of Hokkaido's bases closed down as IWC quotas fell, and today Abashiri is the only place where active whalers reside. In recent years whaling has been of limited importance to the town, and even in its heyday did not dominate the economy. Nonetheless, there exists a group of people for whom whaling has been of fundamental importance both as a livelihood and as a source of self-identity.

Today Abashiri has two boats with STCW licences, but in 1992 just two Baird's beaked whales were taken using boats and crews from Ayukawa. In 1987, the last season of minke whaling, 16 people were employed as crew and a further 16 as flensers at two flensing stations, but today just two crewmembers still have jobs.

Other activities: Rich local marine resources have made Abashiri one of Hokkaido's main fishing centres employing some 500 fishermen. It also receives 1 million tourists each winter who come to see the drift ice.

Population: Ayukawa is one of 15 communities which make up the town of Oshika (pop: 7,700). At the start of the century Ayukawa was a fishing village with fewer than 500 inhabitants. With the arrival of whaling, the population increased steadily to 3,795 in 1955, but it has since shrunk to 2,000. Most of the population today is over 50 years old and the town is slowly dying. The population of Kugunari, another community within Oshika which contributed heavily to the Antarctic workforce, has fallen by more than half since 1955.

Location/Accessibility: On the tip of the Oshika Peninsula, Miyagi Prefecture. Oshika Peninsula is almost entirely mountainous and unsuited to agriculture. 2 hrs by car to nearest station, then 1 hr 45 mins to prefectural capital, Sendai. **Whaling history:** Whaling began here in 1906 with the establishment of an LTCW flensing station. As the local inhabitants were not skilled in whaling, the whalers and most of the flensers were brought in from Kyushu and Shikoku, with some also from Wakayama. Many of these southerners settled in Ayukawa to continue the occupation of their ancestors. At its peak nearly 1,000 people in Ayukawa were active in whaling. Today there are three companies in Ayukawa which operate two flensing stations and have licences for three STCW vessels. In 1992, two of these vessels were used to take 25 Baird's beaked whales and 48 pilot whales, providing jobs for a total of 12 crew, six full-time flensers and three part-time flensers.

The importance of whaling to Ayukawa relative to the other main forms of income, fresh and live fish, can be judged from sales figures at the fish market. From fiscal 1983 to 1986, whale products accounted for between 78.9% and 86.4% of the market's income.

Other activities: Today fishing employs nearly half the working population of Oshika. There is a little tourism as a "whale town" plus some throughflow of tourists to an island of historical interest just offshore.

STCW GOVERNMENT REGULATIONS

SEASONS FIXED BY SPECIES/AREA (SEE BELOW)
SPECIES: MINKE, BAIRD'S BEAKED, PILOT
MAX. VESSEL SIZE: 47.99 TONNES

CATCHES MUST BE LANDED AT SPECIFIED PORTS

STCW VESSELS

VESSEL LICENCES CURRENT: 9 VESSELS USED IN 1992: 5

SIZE OF VESSELS: 15.2 ~ 47.77 TONNES

QUOTAS /CATCHES (1992)

MINKE: 0/0

BAIRD'S BEAKED: 54/54

PILOT: 100/80

WADA

VSHU

0

0

0

Population: Today Wada has 6,390 inhabitants, down from 10,816 in 1958. **Location/Accessibility:** Chiba Prefecture, on the Pacific coast of the Boso Peninsula. This part of the peninsula is largely mountainous, but some small plains exist along the coast which are intensively cultivated. 1 hr 30 mins by train from the prefectural capital. Chiba.

Whaling history: Whaling for Baird's beaked whales has been conducted from Wada since 1948, but has been practiced from one port or another in the south of the Boso Peninsula since 1612. For centuries the land station was in Katsuyama, at the mouth of Tokyo Bay. In the 20th century, however, it has been moved several times, first to Tateyama, then to Shirahama, to Chikura and finally to Wada. Whalers moved with the whaling operations, and in this way the cultural complex of Baird's beaked whaling has diffused across a large part of the Boso Peninsula. The processors and distributors of the meat continue to operate from the towns of Chikura and Shirahama, and both the fresh and dried meat is distributed throughout the south of the Boso Peninsula

Until 1987 Wada had a land station for LTCW vessels catching sperm and Bryde's whales, but today there are just two boats licenced to practice STCW. In 1992, these took 27 Baird's beaked whales and four pilot whales, providing jobs for seven crew and eight flensers.

Other activities: Fishing is an important industry in this region.

SEASONS

Species	Season	Area Ayukawa Okhotsk Sea		
Minke	Apr. 1~Sept. 30			
Baird's Beaked	Jly 1~Aug. 31	Wada Ayukawa		
	Sept. 1~Sept. 20	Abashiri		
Pilot	May 1~June 30	Wada Taiji		
	Sept. 1~Sept. 30	Wada Taiji		
	Oct. 1~Nov. 30	Ayukawa		

MOBILITY WITH CULTURAL CONTINUITY

One of the characteristics of the history of Japanese whaling has been the mobility of its operators, and this mobility has played a decisive role in shaping and disseminating Japan's whaling culture.

Beginning in the 17th century, net owners in the southwest of Japan frequently moved from one whaling ground to another as circumstances required, and because of the special skills involved in whaling and in the making of nets and boats, they took teams of skilled workers with them.

Thereafter, the centre of whaling gradually shifted from the southwest of the country to the northeast. Whalers from Kyushu, Shikoku, the Seto Inland Sea area and Wakayama thus moved with the operators to pursue the occupations of their ancestors, resulting in a long tradition of whaling culture transmitted from father to son with no major discontinuities.

In Ayukawa, for example, LTCW did not begin until 1906, yet most of the skilled workers responsible for creating the industry were recruited in the old whaling communities of the south. One finds the same trend, though on a more localised scale, in the Baird's beaked whale fishery of Chiba. Though the land station in Wada has only operated since 1948, Baird's beaked whaling has been conducted from one port or another in the Boso Peninsula since 1612, and the whalers have relocated with the industry.

Thus we find only one whaling community, Taiji, that has a long and continuous history of active whaling in its own waters. Yet the whaling traditions of many of those communities which no longer have their own land station have continued right up to the present, while those towns which are comparative newcomers to whaling identify with these old traditions just as strongly.

This brochure has been prepared by: The Beneficiaries of the Riches of the Sea. 2-8-3 Higashi Nihonbashi, Chuo-ku, Tokyo 103. Tel: (03) 3851-2584, 2820. Japan Small-Type Whaling Association. Chateau Azabudai 301, 2-3-13 Azabudai, Minato-ku, Tokyo 106. Tel: (03) 3586-6439. **Bibliography** "Small-Type Coastal Whaling in Japan". Boreal Institute for Northern Studies, 1988. "Japanese Whaling: End of an Era?". Arne Kalland and Brian Moeran, Scandinavian Institute of Asian Studies, 1992.



PRODUCTION OF PELAGIC WHALING, LTCW & STCW

Year	Pelagic	Coastal Total				Pelagic	Coastal		Total
		LTCW	STCW	(1,000 tonnes)	Year		LTCW	STCW	(1,000 tonnes)
1932	0.0	22.5	not	available	1963	340.9	24.1	2.0	367.0
1933	0.0	23.1			1964	336.4	23.6	2.5	362.5
1934	0.0	25.4			1965	341.3	21.0	2.7	365.0
1935	2.0	27.7			1966	254.3	23.3	2.3	279.9
1936	7.6	28.5			1967	233.5	28.5	1.8	263.7
1937	26.4	29.3			1968	213.8	39.5	1.6	254.9
1938	66.2	26.6			1969	184.0	38.4	1.6	223.8
1939	85.1	26.1			1970	191.5	34.6	1.4	227.6
1940	107.3	24.4			1971	188.9	33.1	1.3	223.3
1941	127.7	30.7			1972	166.6	26.8	1.1	194.5
1942	0.0	19.1			1973	140.2	22.5	1.2	163.9
1943	0.0	25.7			1974	122.7	21.9	0.9	145.5
1944	0.0	34.8			1975	105.3	20.6	1.0	127.0
1945	0.0	9.3			1976	54.2	22.4	0.6	77.3
1946	0.0	23.8			1977	51.3	19.7	0.7	71.7
1947	34.5	28.6			1978	23.7	17.5	0.9	42.2
1948	45.4	26.8			1979	16.8	13.2	0.8	30.8
1949	55.0	25.0			1980	16.4	15.1	0.6	32.1
1950	68.1	22.6			1981	15.0	12.9	0.7	28.6
1951	58.6	26.4	2.8	87.8	1982	17.9	9.0	0.7	27.6
1952	77.5	28.8	3.4	109.7	1983	16.7	8.9	0.7	26.3
1953	72.1	25.4	3.0	100.5	1984	15.6	8.5	1.1	25.2
1954	107.9	25.9	2.6	136.4	1985	10.2	7.5	0.9	18.6
1955	134.6	26.9	2.9	164.4	1986	10.6	5.5	0.9	17.0
1956	157.3	33.4	3.5	194.2	1987	10.6	5.7	0.9	17.2
1957	199.4	28.3	2.4	230.1	1988	0.0	0.0	0.5	0.5
1958	241.7	33.3	2.9	277.9	1989	0.0	0.0	0.4	0.4
1959	257.0	33.8	2.1	292.3	1990	0.0	0.0	0.4	0.4
1960	266.7	27.9	1.9	296.5	1991	0.0	0.0	0.4	0.4
1961	304.3	26.1	2.1	332.5	1992	0.0	0.0	0.4	0.4
1962	370.9	25.3	1.9	398.1	20000000	13/15			