Chapter V Potential Power of Whales

Abundant protein makes whale meat tastier and provides stamina

Whale meat tastes good. Why is whale meat so tasty?

It is because whale meat is rich with protein.

Chewing in the mouth causes protease, a protein breakdown enzyme in the saliva, to break down protein into amino acids. The amino acids impart *umami*, which makes protein-rich food tasty.

Let's compare protein content of whale meat with that of other meat to see how protein-rich it is. While the protein content per 100 g of lean beef and pork is 17 to 18 g and 22 to 23 g respectively, the content per 100 g of lean whale meat is as high as 24 to 25 g. It is protein-rich with even the tail meat containing 23 g/100 g. In any case, among animal proteins eaten by human beings, whale meat is said to have the highest protein content.

Amino acids provide a source of vitality of all forms of life and eating whale meat does not only satisfy the palate but also generates energy. We should not forget that whale meat is what was behind how people of the war-defeated Japan exerted amazing power to restore the country in a short period of time.

A block of whale meat thawed out and left to stand often produces bright red fluid called drip, which is not blood but protein fluid.

That is, it contains *umami* components. When cooking whale meat, specialists save the drip and heat it up in a frying pan, which turns it into a paste. With drops of soy sauce added into it, the paste tastes delicious, showing that it is full of *umami*.

In addition, inosinic acid, which is a major *umami* component, is contained in abundance in whale meat.

As I mentioned earlier, the Japanese use soy sauce and *miso* as seasonings, which taste very good because the vegetable protein richly contained in soybeans, their ingredient,

Nutrients in Different Types of Meat

	Whale Meat	Beef	Pork	Chicken
Fat (g)	0.4	25.8	5.6	4.8
Energy (kcal)	106	317	150	138
Protein (g)	24.1	17.1	22.7	22
Cholesterol (mg)	38	72	61	77
Vitamin A (μg)	7	2	4	17
Vitamin B1 (mg)	0.06	0.07	0.8	0.1

Source: Fifth Revised Edition of the Standard Tables of Food Composition in Japan (Actual Measurements per 100 g)
Compiled by the Resources Council, Science and Technology Agency

is decomposed by the protease in *koji* mold into amino acids, which mostly consists of glutamic acid. When I eat whale meat, I usually take soy sauce because the inosinic acid abundant in whale meat combined with the glutamic acid of soy sauce produces a multiplier effect of taste, which increases the *umami* by several times.

Grilled whale meat seasoned with soy sauce sprinkled on it is so very delicious that my tongue goes crazy. Soy sauce was used for the stock for whale meat sukiyaki, which made the dish very tasty. Whale meat preserved in *miso*, which I have been eating since childhood, is so delicious that my mouth is always flooded with water as I eat it.

The Japanese had ingenious ways of preparing and cooking whale meat and, in addition, soy sauce and *miso,* seasonings capable of enhancing the flavor of whale meat. That is what made the Japanese captivated by whale meat.

Astonishing power of balenine

One thing worthy of special mention about whale meat is a component called “balenine.” Balenine, which was discovered recently, is contained in abundance especially among amino acids of whales and greatly attracting attention.

Whales seasonally migrate between the Antarctic Ocean, which provides feeding grounds, and equatorial seas, where they spend their breeding season. When they migrate from the breeding waters to feeding grounds, they hardly feed themselves but

breast-feed their children while fasting and travel about 5,000 to 6,000 km without resting to return to where they feed. For a long time, what gave whales such power was a puzzling question for whale researchers and a special amino acid called balenine was found to be the answer.

Accordingly, this balenine was used to conduct various stamina tests. As a result, those who took it proved to experience less fatigue and showed more momentum of muscles. Balenine was found to be a component very useful for muscular endurance and fatigue prevention.

Whales have balenine in massive quantities in the body.

The content of balenine per 100 g of meat is within 2 mg for beef and within 48 mg for pork, which is 1,466 mg for fin whale meat and as much as 1,874 for minke whale meat.

The secret of the marvelous vitality of whales was in balenine, which has now brought it great attention as a stamina-providing supplement.

Recently, another wonderful component has been discovered from the body of whales, which is drawing attention all of a sudden. It is a functional component discovered by a group from Tohoku University and is called “plasmalogen.” Its efficacy includes nerve cell death inhibiting effect, antioxidation and effect of adjusting the active membrane fluidity of precursors of signals in polyunsaturated fatty acid storage cells. Specifically, the component has the effect of constantly rejuvenating cells, eliminating carcinogenic reactive oxygen, preventing brain cell death and arterial sclerosis and shows significant effect for the prevention and treatment of Alzheimer’s disease, in particular. Further research is currently in progress and practical application is under consideration. Plasmalogens exist in the cerebral cortex, cerebral medulla, cerebellar cortex, cerebellar medulla, medulla oblongata and liver of whales. They have been unused as whale materials, which also draws attention to them.

Whale nutrition works to meet female-specific needs and prevent lifestyle-related diseases

In addition, whale meat abounds in minerals. The content of iron is especially high and it exists in the form of organic iron called myoglobin iron, which makes it more

absorbable in the body. Organic iron is highly absorbable in the body, which is why whale meat is very effective for anemia and menstrual irregularity and has long been said to work like magic on problems during recovery after childbirth including prolonged poor physical condition. Accordingly, the custom spread nationwide of giving pregnant and postpartum women whale meat to eat. The mineral content of whale meat is as much as 3.5 times higher than pork and 1.5 times higher than beef.

Yet another major feature is that the cholesterol content of whale meat is very low, which makes it an object of great attention as health food.

The average cholesterol content per 100 g is 61 mg for pork, 72 mg for beef and 77 mg for chicken, where it is only 38 mg for whale meet.

What is even more amazing is fat. Whales have their fat concentrated in the skin and the flesh does not have high fat content. The percentage of fat is 5.6% for pork, 4.8% for chicken and 25.8% for beef. By comparison, it is as low as 0.4% for whale meat. In addition, the fat of whales that is concentrated enough to form fat layers in the skin and tail is unique among animal fats and very good for the body.

For example, whale fat once melted does not easily solidify but other animal fats, whether beef or pork fats, solidify to become white at room temperature.

It is because other animal fats contain a large amount of saturated fatty acid, which makes the melting point higher and solidifies the fat into lumps at room temperature.

In contrast, vegetable oils such as salad oil, *tempura* oil for deep-frying, soybean oil and sesame oil are always in a liquid state and do not solidify. Vegetable oils made of unsaturated fatty acid do not solidify because of the low melting point. Whale fat is closer to vegetable fat than animal fat and most of it is made of unsaturated fatty acid.

Unsaturated fatty acids strengthen blood vessels including capillaries and whale fat has long been known to be effective for preventing high blood pressure and heart disease, lowering the blood cholesterol level and preventing arterial sclerosis. Whales have been attracting attention for prevention of lifestyle-related diseases as well.

In addition, high-molecular unsaturated fatty acids such as eicosapentaenoic acid (EPA)

and docosahexaenoic acid (DHA) are abundant in whales.

EPA, which decreases blood clotting, is effective for preventing vascular diseases such as cerebral hemorrhage and myocardial infarction and some research results even indicate its cancer prevention effect

DHA functions to activate the brain to improve learning capacity, prevent eye aging and recover from eye fatigue.

Furthermore, what I think appeals to women is that whales are abundant with collagen. Whale meat and skin contain large amounts of collagen, which has wonderful effect on beauty. That is why mistresses of whale restaurants are all said to have silky skin.

Whales also abundantly contain active vitamin A, which activates bodily functions.

All in all, whale meat provides a food material that is overwhelmingly good for the health as compared with meat of other animals. Not eating whale meat would be missing out on a lot.

Amazingly whale meat not causing allergies

Whales have yet another marvelous characteristic.

One out of three Japanese is now said to have a susceptibility to allergic reactions and children suffering from food allergies, in particular, are increasing year by year. Whale meat is attracting attention as amazing food that does not cause allergies. Japanese can develop allergies to beef, pork or chicken and the number of such people is increasing but no Japanese is allergic to whale meat.

Allergic reactions do not only include rash or itchy skin but minor stomach aches or discomforts that people may not be clearly aware of may prove to be some sort of allergic reactions if examined. Just eating buckwheat noodles may cause a terrible allergy and respiratory difficulties to some people.

Why whale meat does not cause allergies is not yet clearly known but the Institute of Cetacean Research provided whale meat and conducted joint research at a hospital in

Shiogama City, Miyagi Prefecture. In Shiogama, a city located close to Onagawa, which used to have a whaling base, whale meat is often eaten.

As a result, it was clearly shown that even people allergic to ordinary animal meat (such as pork, beef and chicken) did not develop allergies to whale meat.

Accordingly, whale meat can be fed to children unable to take in animal protein due to allergies to eggs, beef, pork, chicken, etc. and the Japan Whaling Association and an organization called the Woman's Forum Fish are campaigning for providing whale meat for children.

In the past, whale meat supported the Japanese as a valuable source of protein. Likewise, it is still helping children behind the scenes.

Then, why does whale meat not cause allergies? Several hypotheses have been proposed to answer that question. One is it may relate to the fact that children in the present age were born from parents in the generations without the experience of eating whale meat. The idea is that parents themselves do not have allergies to whale meat and their children naturally should have no allergies.

Another more substantial hypothesis is that whale meat is free from marine pollution and does not cause allergies.

It is feared recently that marine pollution will worsen around the world. Pollutants emitted by humans include cadmium, mercury, dioxins, organic phosphorus and PCBs (polychlorinated biphenyls), which flow through rivers to eventually reach oceans. They are carried by currents to various parts of the earth. Those substances contaminate living things starting with small species seafood such as krill at the early stage of food chain. Whales swallow them whole. Accordingly, whales, which are at the top of marine ecosystems, may have the pollutants accumulated in the flesh.

On the contrary, examinations of whale meat by whaling researchers and research institutions around the world have shown that, surprisingly, whales in the Antarctic Ocean are hardly contaminated. For example, take PCBs, which are strong pollutants with carcinogenicity. The PCB content of minke whales in the Antarctic Ocean is 0.00018 ppm. By contrast, the average for other fishes is 0.5 ppm, which is about 2,700

times higher than that of whales.

With mercury, as described earlier, the average content for fish is 0.4 ppm as compared with 0.027 ppm for whales, about 1/15 (see the table on page 156).

This is assumed to be related to flows of ocean currents. For example, a comparison between krill in the Northern Hemisphere such as the Bering Sea and the Norwegian Sea and krill in the Antarctic Ocean has shown that krill in the north are far more heavily contaminated. In addition to the effect of ocean currents like this, there is a hypothesis that more people living in the Northern Hemisphere than in the Southern Hemisphere may be an influencing factor.

In Japanese research whaling, 70% of the whales are caught in the Antarctic Ocean. Therefore, whales that can be eaten in Japan now can be said to have little danger of contamination.

Great whale recipes in the Edo period

The Japanese, who have long known such healthy food as whales by direct experience, have eaten them in a variety of ways as explained in Chapter I.

At present, the most popular dish in whale restaurants is sashimi, or eating whale meat raw. In the past, however, fresh meat was only available to people living near the sea and it was impossible to eat raw in most cases.

Generally, salted whale meat, organs and skin called *shio kujira*, which literally means "salted whale," was in wide distribution. The *shio kujira* was soaked in fresh water for desalting and roasted on skewers on an open fire for eating, which was called *yaki* (roasted) *kujira* and very popular. The roasted meat was also dried in turn for eating as *hoshi* (dried) *kujira*.

Kujira no tare, or *tare* of whale, which still remains, is a specialty of Wadaura, Chiba Prefecture and a recipe that goes back to the Edo period. *Kujira no tare* is a delicious way of preserving whale meat. Sliced whale meat is soaked in a mixture of soy sauce and *mirin* rice wine, which can be dried for long-term preservation. The color is deep-black and the meat is tough because it is dried but seasoning makes the meat very

tasty when it is lightly roasted on a charcoal fire.

Kujirajiru, in which salted whale skin with blubber is sliced and stewed together with vegetables such as daikon, carrots, burdock roots and Welsh onions in *miso* soup is often eaten even now. Whale skin comes with a lot of good-quality fat and slurping the *miso* soup with blobs of fat swimming on the surface while eating the gelatinous part fills the mouth with flavor and the fat and salt blend together suitably to taste delicious. In addition, it provides nutrition and warms you up.

Furthermore, there were various recipes even in the Edo period such as dipping whale skin in *mirin* rice wine, dipping in *irizake*, which is a seasoning prepared by boiling down Japanese sake, before grilling and soy-marinating before roasting. In those days, whales, once caught, all needed to be preserved and so many different methods of preservation and recipes were developed.

Geiniku Chomikata, a book written by a scholar called Oyamada Tomokiyo in the mid-Edo period is extremely interesting. This book contains recipes for as many as 67 different parts of the whale body including internal organs, skin, breasts, uterus, eyeballs and penis, not to mention meat.

Let me present some of its content here. It suggests how the Japanese of the past valued and relished whales and how they yearned for whale meat.

Kurokawa is the black skin cut together with about 2 cm of fat remaining on it and very tender. It can be sliced and dipped in unmixed soy sauce or *irizake* for enjoying the great taste. Stewing and boiling together with burdock roots are two of other good ways to eat the part.

Saya (currently known as *saezuri*) is the tongue, which can be casseroled together with vegetables or dipped in boiling water followed by a sauce of sake, soy and vinegar. Salted *saya* can be sliced and soaked in water.

Using vinegar, I think, is an ingenious way of eating the fatty tongue.

Teira, which refers to the tail meat, is available as salted food (*shio kujira*). It is cut into narrow lengths, rinsed with water for several times for desalting and stewed together

with burdock roots and mushrooms.

Kohige refers to the gum and has a very light flavor. It is sliced and dipped in soy sauce for eating or seasoned with *irizake* for grilling.

Denzuru is the jaw meat and very tough. Salted *denzuru* can be sliced and soaked in water for desalting, over which boiling water was poured for eating with a sauce of vinegar and *miso*.

Fukiwata refers to the lung and is cooked in casseroles. Surprisingly, people of the past went so far as to eat the lungs. Whale lungs were enormous and quite satisfactory. It is mainly made of protein and has a very spongy feel in the mouth.

Usu refers to the heart and can be eaten as *tempura*.

Choji is the stomach. Deep-frying and boiling together with other ingredients are common ways to cook this part.

Kaburabone refers to the marrow of the skull and can be marinated in sake lees or *miso* to eat.

Hyakuhiro refers to the small intestine. It can be casseroled or boiled in water and dipped in soy sauce, *irizake* or a sauce of sake, soy and vinegar.

Shobenbukuro is the bladder. The book says that it “should not be eaten raw, is frivolous but unrefined” but it was boiled in water and dipped in soy sauce to eat.

Owata is the large intestine. While it contains excreta and is unrefined, it is not inedible and can be cleaned well to boil in clear soup or roast to eat.

Mamewata refers to the kidney, which can be deep-fried to eat.

Takeri refers to the penis and can be deep-fried to eat. It can also be dried in cold winter, which can be shaved to put in *miso* soup to eat when suffering from a stomach ache. It relieves the pain and a chill in the hips as well.

These descriptions form only a small part of the book, which are nothing but marvelous. The book shows ample knowledge of various parts of the whale body from the Edo period and gives various instructions on how to prepare those different parts. Only, the liver and the pancreas were hardly eaten. How were they used? They mostly provided ingredients of drugs. The liver was mainly used for anemia drugs and often used for women's diseases as well.

Sperm whales even provided a very expensive natural perfume called ambergris, which was prized. In this way, whales were used not only as food materials but also as drugs and perfume.

My top five recipes

Now, I would like to present my top five recommended whale recipes.

Let me start with the very top.

People often ask me, "You have eaten such a variety of food around the world, Mr. Koizumi. What would you like to eat for your last supper?"

A straightforward answer to that question is: whale pepper steak *donburi*, or a bowl of rice topped with whale pepper steak. Steak of inexpensive lean meat is the best.

Cut lean meat into about 1cm-thick pieces the size of a postcard, heat a small amount of oil on a frying pan and first broil one side. Wait for about 30 seconds until the surface turns white, turn the meat over and broil for another 30 seconds. The surfaces are white but the inside is almost rare. Sprinkle a rather larger amount of pepper onto it. Inexpensive pre-ground black and white pepper mix, rather than freshly-ground gourmet pepper, suits this dish.

Then, pour soy sauce over it and broil for another 10 seconds or so. Put the steak on a plate and carve with a knife. Separately prepare freshly-cooked rice in a bowl seven-tenths full. Put plenty of pepper steak on the rice together with the gravy produced. Voilà! Start on your steak with a hot cup of coarse tea at your side. From the bowl rise the savory smell of broiled whale meat, the unique rustic flavor of whale meat, the indescribable, appetizing aroma of soy sauce and the scent of pepper!

First chew the meat alone and savor the taste. Enjoy the gravy that oozes out of the half-rare meat. Then, chew the meat together with the piping hot rice while breathing to cool inside the mouth. The flavor and the spiciness of the soy sauce and the pepper are combined together, with which the mild taste of the rice is mixed. Yummy! If I could go while eating this dish, thinking that this is exactly the proper taste of whale meat, I would be dying a happy man.

The second best is: whale *misozuke* (*miso*-marinated whale meat). Again, lean meat is best. Marinate whale meat in *miso* for a day or two, wipe the *miso* off and grill to eat.

You may think that it is too salty but it is not really so. Try grilling this *misozuke* to put a big slice on top of rice in a lunch box. You would need nothing else. Eat rice while nibbling on this grilled whale *misozuke*. The wonderful weighty flavor of *miso* and the relish of whale meat merge and gush out, where the mild taste of rice comes in to come together. You would be overcome with the great taste that might cause you to faint.

The third place goes to: whale meat sukiyaki. Whale meat sukiyaki has long been a popular dish among the Japanese. When I was little, sukiyaki often referred to whale meat sukiyaki, which was delicious.

The recipe is the same as ordinary sukiyaki, in which beef is cooked in soy sauce-based stock, but extra tofu should go well with whale meat sukiyaki. The flavor of whale meat is absorbed in tofu, which makes it even more delicious.

On top of that, add Welsh onion, Chinese cabbage and konjac noodles and simmer them together. Dip the cooked food in beaten raw egg to enjoy and drink hot Japanese sake together. The taste is out of this world.

When it comes to whale meat simmered for eating, whale sinew should not be forgotten. Unlike beef, whale meat contains tough sinews everywhere and the delight of chewing them is exceptional. More and more of the *umami* overflows as you chew longer while enjoying the texture and whale meat sukiyaki abounds in rustic flavor.

If you have leftovers, reheat the sukiyaki and put it on the rice in a lunch box on the following day. It is so delicious it gratifies your tongue.

My fourth choice is *geikatsu*, or whale meat cutlet, without which the list would not be complete. My favorite is *geikatsu* of lean meat covered with bread crumbs and it tastes heavenly especially when it is freshly deep-fried. When you order *geikatsu* at whale restaurants, the coating is often pretty thick but the coating should not be too thick.

I entered a university and came to Tokyo in 1962. I often ate *geikatsu* at set meal restaurants in those days.

In Shibuya, there was a cheap drinking area called Hyakkendana, where I ate often. *Geikatsu* and *tatsuta fries* served in bars in those areas were inexpensive and tasted good. Many people put mustard on *geikatsu* as a flavoring but I would decisively go for soy sauce. *Geikatsu* flavored with say sauce on top of rice served in a large bowl. The *geikatsu* had crunchy covering and the meat inside was springy, which was really good-tasting.

In Shinjuku, I used to eat whale meat almost every day in a drinking area now called by a respectable name of Omoide Yokocho (literally meaning “Memory Lane”), used to be known as Shonben Yokocho (“Piss Lane”) in those days. I often visited one of the restaurants there called Asadachi, which still exists and features stamina-boosting food, since I was a student to enjoy various delicacies. This is a truly wonderful place.

Lastly, the fifth place goes to – excuse me for choosing another deep-fried dish – *geiten*, or whale *tempura*.

Even now, I cook whale meat *tempura* whenever I get my hands on whale meat. First, cut lean meat into thin slices. Then, cover them with a batter made of a mixture of flour and egg and deep-fry for a short time to make *tempura*. *Geiten* with deep-fried whale meat looking almost transparent in black. That is the best.

To eat the *tempura* as an elegant cuisine, using a dip containing grated daikon is fine. The most delicious way, however, is to place five or six pieces of *geiten* on a plate, pour soy sauce over them and put the *geiten* permeated with soy sauce on top of hot rice in a large bowl.

Lean meat of whales does not contain much fat and the oil of *tempura* goes well

together.

The soy sauce coupled with the oil of *tempura* sticks to the rice, which is mouthwatering as well.

My top five choices are these dishes. Fresh whale meat would naturally be great as sashimi but lean meat prepared with an extra touch was always delicious in any way of eating. In Kansai region, dried whale skin with blubber on it is called *koro*, which is tremendously popular in Kansai. This *koro* and lean meat are stewed together with Japanese mustard in stock made of dried bonito to make a hot pot dish called *hari-hari nabe*, which is a local specialty of Osaka, and Tokuya in the Sennichimae area is a real name-brand restaurant.

Koro on skewers cooked as an ingredient of a one-pot dish called *oden* is also exquisite.

Otherwise, I have eaten quite a lot of *tatsuta* fries mentioned earlier, whale rice seasoned with soy sauce and cooked together with whale meat, whale meat barbecue and whale meat grill. Recently, ways of eating whale meat have become even more varied to include such popular dishes as, as I hear, Korean-style barbecue where pieces of whale meat are marinated in sauce and roasted on a hot plate, whale meat burger, curried whale meat grilled with cheese, whale meat grilled with tartar sauce, Tosa-style whale *tataki* where the outer surface of the meat is lightly grilled and served in slices together with seasoning, *shisomaki age*, or slices of whale meat rolled together with Japanese herb and deep-fried, and whale meat salad where slices are marinated together with sliced celery and onion.

Missing whales more and more each year

In conclusion we should never forget canned whale meat. In Japan, canned whale meat started to appear on the market in around 1945.

What I have a nostalgic feeling about whales is toward canned whale meat. In fact, I still have a whale meat can dated 1962, which I had treasured up when I was an elementary school student. I cannot eat it because it would seem wasteful.

In those days, canned whale meat mostly referred to *yamatoni*, a dish of meat simmered

in soy sauce with ginger and sugar.

Then, there was canned *sunoko*, which was the finest. It was simmered *sunoko*, or the meat and sinews under the belly, and was so very delicious. The sinews, which are mostly gelatinous, are springy and flash gold. The sinews were difficult to bite through but I enjoyed it.

It may be unthinkable in the present day but we used to take canned *sunoko* on outings and camps, cooked rice in mess tins and put the *sunoko* on top of hot rice for eating. As I remember now, it is mouthwatering and eye-watering at the same time.

Another good memory is whale meat sukiyaki in cans. In addition to whale meat, they contained tofu, bamboo shoots and konjac noodles. These whale "*yamatoni* can," whale "*sunoko* can" and whale "sukiyaki can" are my top three whale dishes in cans.

Whales are good for the health but, even more than that, the delicious taste, once you have known it, makes you miss whales more and more as the supply decreases in the market.

If this trend continued and whales disappeared from the market, it would be all too regrettable. No, we should not let it them decrease any further. My love for whales keeps growing with the years.

Afterword

Now that I have finished writing this book, I keenly realize the ethnic difference in the feeling for whales. Any more tedious explanation as the Afterword would be meaningless to my dear readers who have read the body. I believe that they now have a full understanding of how whales are currently positioned and what will become of them and how they should be in the future. Anyway, my feelings toward whales are no more than proper grounds of an argument presented by a Japanese.

However, whales, which helped the Japanese in the past, are about to help us again now. On reflection, I, an undernourished child in the chaotic period immediately after the war, was captivated by the taste of whale meat served as a dish accompanying the rice and enjoyed eating it a lot.

Currently, whale meat has become an illusion and ceased to be available at a bargain price as in the past and whale meat-eating involves delicate matters not only including different views between countries but also arguments for and against within Japan. Therefore, the time has come to discuss it from an abstract perspective such as the "balance of marine ecosystem," rather than specific arguments such as "no permission to catch whales" vs. "whaling."

That is why the Scientific Committee of the International Whaling Commission (IWC) has conducted the present latest scientific research and encouraged the resumption of some of commercial whaling. The past mistake of causing ecosystem deterioration by reckless whaling should certainly be reflected upon but excessive protection of whales also affects the entire marine ecosystem, which is a dispensation of nature.

For example, the amount of marine biological resources consumed by cetaceans in all water areas on earth is estimated to be about 500 million tons annually, which is as large as more than five times the present global seawater fishing production of approximately 90 million tons. Balanced utilization of the marine ecosystem would allow utilization of a large amount of fishes that whales prey on, as well as the whales themselves, as our food, which would provide an insight into measures to deal with the explosive increase in the global population expected.

What these figures mean is that excessive protection of whales would cause shortages of

food of whales, which may affect the whales themselves. In 1994, the IWC adopted the “sanctuary declaration” of accepting no whaling in the Antarctic Ocean. However, research conducted by the Scientific Committee of the same IWC has shown that whales, including humpback, sei, fin and other whales as well as about 760,000 minke whales, exist in the numbers exceeding the appropriate levels.

Now is the time we should form a conclusion based on careful consideration of the importance of the balance of marine ecosystem independently of emotional arguments. We should never forget that whales are there not only for anti-whaling countries but also for countries watching over the ecosystem on the entire planet.

In writing this book, I am deeply indebted to the Japan Whaling Association and the Institute of Cetacean Research, which provided me with valuable data, and Mr. Takayama Takehiro of the Japan Whaling Association and Mr. Umezaki Yoshito, President of the Japan Fisheries Journalists' Association, who offered their precious opinions to me. My sincere gratitude also goes to Ms. Sanada Harumi, the editor, who gave me tremendous support in publishing this book.

In 2018, eight years after the publication of this book, Japan withdrew from the IWC and finally found its way to commercial whaling. This means that Japan carried out its belief and the future depends on how we can utilize whales while preserving them at the same time.

Data Chronology of Whaling

Dominical Year	Japanese Era Name	Developments in Japan	Developments in the World
BC		Bones of cetaceans from sites of the Jomon period suggest that whales drifted into bays were caught	Greeks make whale accessories in around BC2000
8th century	Nara period	Whale mentioned in *The Kojiki*. Since then, whales come to appear often in literature	
9th century			Whaling starts in Spain, Norway and France
12th century		Hand-harpoon whaling starts in Japan	
1606	Keicho 11	Organized whaling by "whaling groups" starts in Taiji	
1611			U.K. starts catching bowhead whales in the Arctic Ocean
1612	Keicho 17	Baird's beaked whaling by hand-harpooning starts in Chiba Prefecture	
1675	Enpo 4	*Amitori shiki* whaling starts in Taiji, contributing to rapid expansion of whaling	

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1712			Sperm whaling (American-style sailboat whaling) starts in the U.S.
1838	Tenpo 9	Organized *amitori shiki* whaling starts in Ayukawa	
1846	Koka 3	Two hundred and ninety-two U.S. whalers operate in seas	

		close to Japan Around this time, U.S. whalermen actively whale in seas close to Japan with as many as 500 to 700 whalers maximum operating in the end	
1853	Kaei 6	A fleet led by Commodore Perry visits Uraga to demand trade and commerce The demands included supplies and repairs for whaling fleets	
1864			Modern whaling developed in Norway
1868			With harpoon guns completed in Norway, Norwegian-style whaling starts
c. 1870		About 300 U.S. and UK whalers operate in seas close to Japan Fishing grounds depleted and Japanese *amitori shiki* whaling declined	
1879	Meiji 12	An accident during hunting kills 111 whalermen of Taiji This accident called *Oseminagare* leads to the decline of whaling groups	
1891			Russia establishes Russian Pacific Whaling Company, operating off the coast of Korea and exporting whale meat to Nagasaki
1899	Meiji 32	Nihon Enyo Gyogyo K.K., a whaling company, established, Japan's first Norwegian-style whaler (*Choshu Maru No. 1*) built	

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1903			World's first crab-fishing and canning boat (Dutch) goes fishing in the Arctic Ocean
1904			Norway succeeds in whaling in the Antarctic Ocean for the first time in the world Whaling base set up on South Georgia and Antarctic whaling begun
1906	Meiji 39	Modern whaling starts in Japan with construction of modern whaling base in Ayukawa	
1931	Showa 6		Convention for Regulation of Whaling founded in the League of Nations
1934	Showa 9	Japan enters mother ship whaling in the Antarctic Ocean	
1936	Showa 11	Japan's first whaling mother vessel built	
1937			International Agreement for the Regulation of Whaling concluded
1940	Showa 15	Japan goes whaling in the northern waters	U.S. quits whaling
1941	Showa 16	Japan suspends mother ship whaling upon the outbreak of WWII	
1945	Showa 20	End of WWII After the war, navigation permitted within 12 miles from the coast of Japan	

1946	Showa 21	Japan resumes whaling in Antarctic Ocean	International Convention for the Regulation of Whaling concluded
1948			International Whaling Commission (IWC) established
1949			1st IWC meetings held

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1951	Showa 26	Japan joins IWC	
1959			Olympic game style abolished Self-declared whaling starts
1962			Country quota system starts
1963			Hunting of humpback whales in Antarctic Ocean banned UK quits whaling
1964			Hunting of blue whales in Antarctic Ocean banned
1972	Showa 47	Japan starts minke whaling	Resolution calling for 10-year moratorium on commercial whaling adopted at United Nations Conference on Human Environment Catch quota by whale type system starts Norway withdraws from whaling in the Antarctic Ocean
1975			New Management Procedure (NMP) adopted Greenpeace starts protest action against whalers
1976			Hunting of fin whales in

			Antarctic Ocean banned
1977			Paul Watson establishes the Sea Shepherd Conservation Society
1978			Hunting of sei whales in Antarctic Ocean banned

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1980			Sea Shepherd Conservation Society sinks a whaler (of Somalian registry) that is a non-member of the IWC
1982			IWC adopts a commercial whaling moratorium Canada withdraws from the IWC
1985	Showa 60	Japan withdraws objection to IWC moratorium	
1986	Showa 61	Only coastal small-scale whaling and dolphin hunting come under national control	
1987	Showa 62	Japan withdraws from Antarctic whaling and starts research whaling (JARPA)	
1990			IWC estimates population of minke whales in Antarctic Ocean as 760,000
1992			Iceland withdraws from the IWC North Atlantic Marine Mammal Commission (NAMMCO) established IWC completes development of Revised

			Management Procedure (RMP)
1993		Norway resumes commercial whaling	
1994		Japan starts research minke whaling in Northwest Pacific Ocean (JARPN)	IWC adopts Antarctic Ocean whale sanctuary

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1997			Ireland makes a compromise proposal for resumption for commercial whaling
2000	Heisei 12	Japan starts the second phase of the JARPN with Bryde's and sperm whales added	
2002	Heisei 14	Japan starts the second phase of the JARPN full-scale research with sei whales added	54th IWC meeting held in Shimonoseki, Yamaguchi Prefecture Iceland returns to the IWC
2003			IWC establishes the Conservation Committee, proposed by anti-whaling countries, in the 55th meeting (Berlin)
2005	Heisei 17	Japan starts the second phase of the JARPA for Antarctic minke and fin whales	
2006			IWC adopts St. Kitts and Nevis Declaration, which states the non-necessity of the moratorium and calls

			for normalization of the IWC, in the 58th meeting Iceland resumes commercial whaling
2007	Heisei 19	Conference for the Normalization of the IWC held in Tokyo	

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Profile

Koizumi Takeo

Born in 1943 to a sake brewer in Fukushima Prefecture, Japan. Raised from the cradle in an environment with fermentative microorganisms that function to make sake and *miso*. Currently a professor emeritus at the Tokyo University of Agriculture, a visiting professor at Hiroshima University Graduate School, Kagoshima University, Beppu University and the University of the Ryukyus and holds various positions including a visiting researcher at the Policy Research Institute, Ministry of Agriculture, Forestry and Fisheries, President of the Council for the Promotion of Improvement of the Food Self-Sufficiency Rate, President of the Society for the Protection of Whale-Eating Culture and President of the National Council for the Local Production for Local Consumption. As a doctor of agriculture, Koizumi specializes in zymology, fermentology and theory of food culture.

He occupies himself with running many serials in *The Nihon Keizai Shimbun* and various magazines, appearing in TV and radio shows and giving lectures all over Japan. The books he has written include *Shoku no Daraku to Nihonjin* (Deterioration of Food and the Japanese), *Nippon Kaishoku Kiko* (Japan Great Food Travelogue) (both from Shogakukan Paperback), *Mazui!* (Tastes Terrible!), *Bukkake Meshi no Kaikan* (Get a Kick out of Bukkake Rice) (both from Shincho Paperback), *Hakko Shokuhin Raisan* (Glory to Fermented Food) (from Bunshun Paperback) and *Shoku to Nihonjin no Chie* (Food and Wisdom of the Japanese) (from Iwanami Contemporary Paperback), amounting to over 100 sole-author books. Despite his busy schedule, Koizumi has continuously been on food adventures, running around the world in search of delicacies.