

Japanese  
Culture  
Pearls

K. MIKIMOTO

HEWITT  
Ginza TOKYO

OF GEMS & GEM-CUTTING

MINERALOGY · EMERALD · AND · OTHER · BERYLS · CATALOG

GEMSTONES · OF · NORTH · AMERICA · PROSPECTING · FOR · GEM

MINERALS · AND · STONES

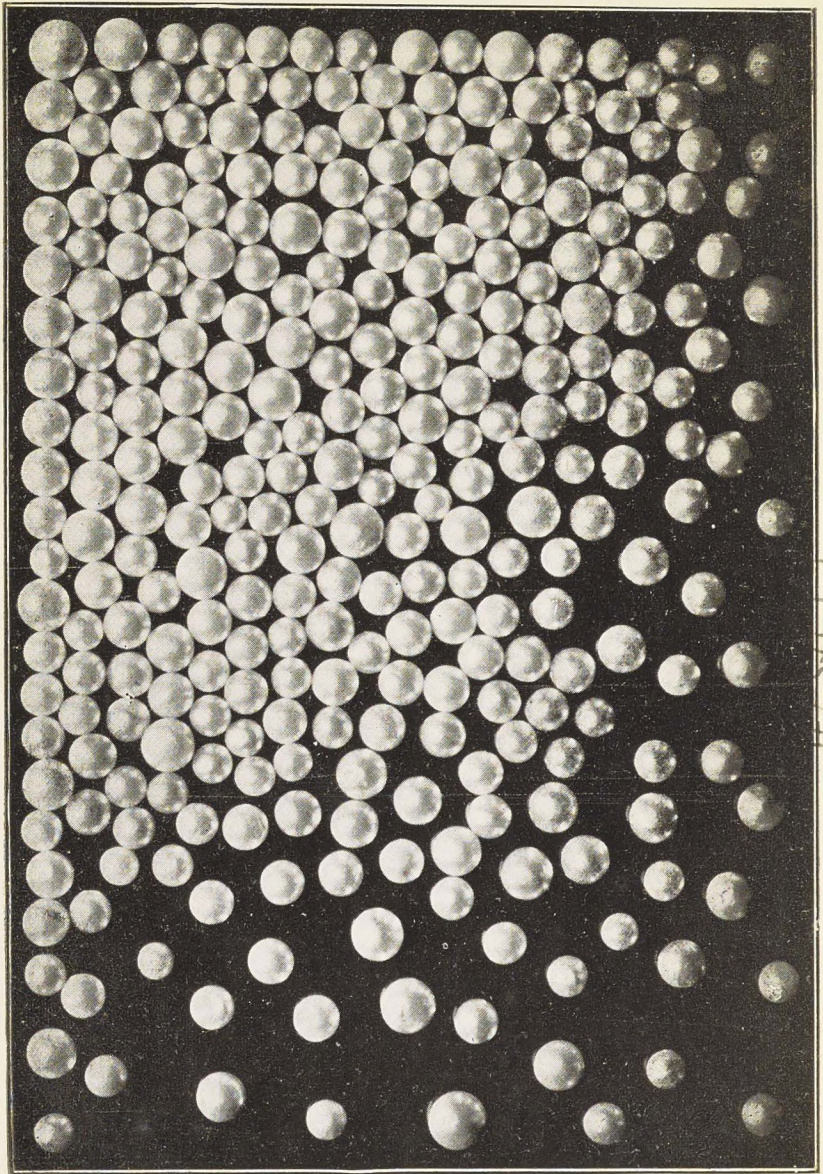
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P.S.

TAKEO KUME

N. Y. Representative of  
Mikimoto Pearl Store  
546 Broadway, New York.

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*A lot of Culture Pearls*

Japanese  
Culture Pearls

A SUCCESSFUL CASE  
OF SCIENCE APPLIED  
IN AID OF NATURE

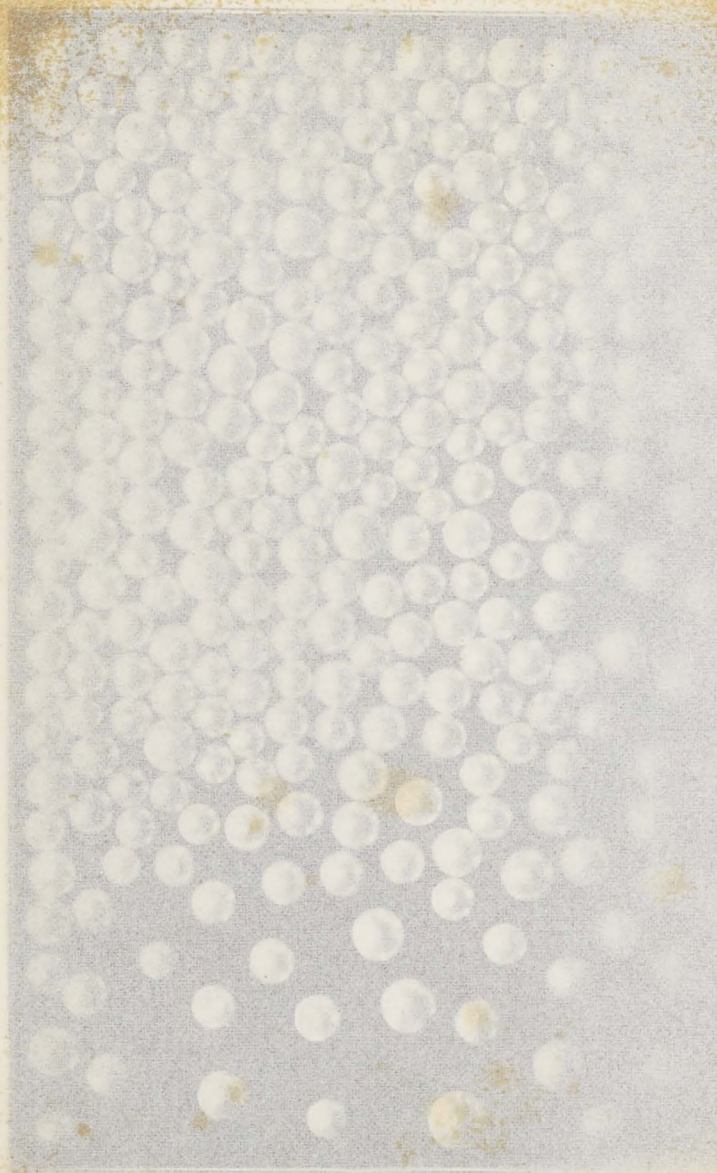
*K. Mikimoto*

No. 3, GINZA-SHICHOME,

TOKYO.

1911.

*Heard*



*A Jar of Culture Pearls*

Japanese  
Culture Pearls

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A SUCCESSFUL CASE  
OF SCIENCE APPLIED  
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*K. Mikimoto*

No. 3, GINZA-SHICHOME,

**TOKYO.**

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1911.

*Hewill*

*The Nature of Pearls*

*Culture Pearls*

*The History of the Japanese Culture Pearls*

*The Mikimoto Pearl Culture Farm*

*The Japanese Culture Pearls*

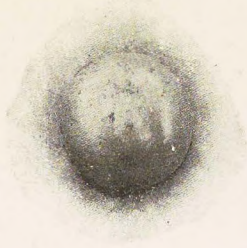
*Recognitions of Success*

*“Gumbai sen” or War Fan*



*The largest and finest  
Abalone Pearl ever  
found in Japan, kept  
in Mikimoto's Store.*

*138½ grains.*



**I**N Henry Van Dyke's beautiful story, "The Other Wise Man" we read :—

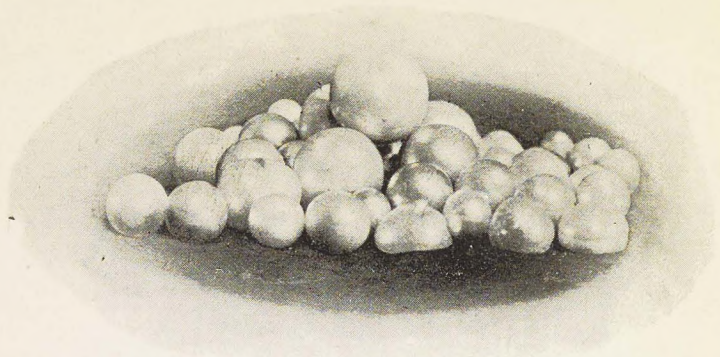
"He had taken from a secret resting place in his bosom the pearl, the last of his jewels. As he looked at it, a mellower lustre, a soft and iridescent light, full of shifting gleams of azure and rose, trembled upon its surface. It seemed to have absorbed some reflection of the lost sapphire and ruby. So the secret purpose of a noble life draws into itself the memories of past joy and past sorrow."

Then again in another part of the story we read :—

"Never had the pearl seemed so luminous, so full of tender living lustre. He laid it in the hand of the slave. 'This is thy ransom daughter! It is the last of my treasures which I kept for the king.'"

Perhaps it would interest you to know more about this wonderful and precious jewel which could not only reflect the beauties of other gems, but also put power into the hand of the feeble wise man to save a poor girl from a life of misery.

Hewitt



*A Jot of Natural Pearls*

### The Nature of Pearls.

In early times people had all sorts of ridiculous and extravagant ideas about the way in which pearls were produced. Even so learned a man as Pliny believed that they were drops of dew, which falling into the gaping mouth of the mollusc, were transformed, by the animal's power, into pearls. From Ariel's song in "The Tempest,"

“ Full fathom five thy father lies ;  
Of his bones are coral made ;  
Those are pearls that were his eyes :  
Nothing of him that doth fade,  
But doth suffer a sea change  
Into something rich and strange,”

we see that in Shakespeare's time also, men had peculiar notions about the wonders wrought by the animals of the sea. Then, again, in Moore's poem, "Peri and the Pearl," we find :—

“ And precious the tear as that rain from the sky

Which turns into pearls as it falls in the sea.”

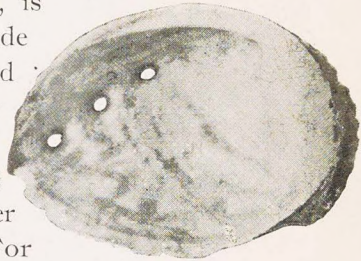
Aelian thought that pearls were produced by lightning flashing into the open shells.

Turning from these fantastic, though interesting, theories let us glance at the modern explanations of the formation of these beautiful products of Nature.

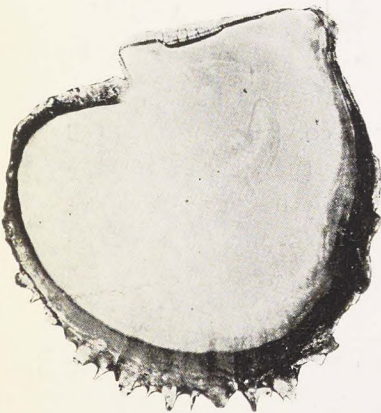
You have, no doubt, often seen shells of Molluscs lined with a smooth and iridescent coating which is called *nacre* or mother-of-pearl. This coating, like the rest of the shell, is produced by the animal and is made up mostly of carbonate of lime and an organic matrix which usually presents a laminated texture. You must have noticed that the color and brilliancy of this layer differ in various species of shell. For

instance in the ordinary oyster it is of a lustreless white, and in a kind of shell called *abalone* or ear shell (*Haliotis*), the nacre is of a greenish blue tinge, changing to purple as you turn it in your hand. In another

kind, known as the black-lipped-shell (*Margaritifera*), the mother-of-pearl is of a



*Abalone shell.*



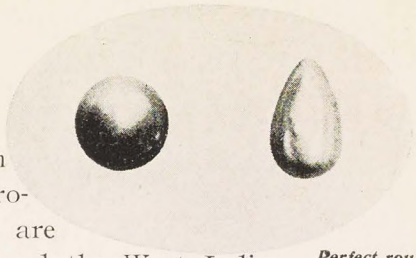
*Black-lipped-shell*

greenish black color. In the shells of the true pearl-oysters the nacre is of a clear, delicate white, which has the sheen of floss silk faintly tinted with azure, exhibiting a beautiful play of color—a quality which makes these shells of great value in commerce.

Now it often happens that foreign substances such as sand grains, microscopic organisms of various kinds, parasitic worms, crabs, or sometimes even small fishes become introduced by accident or otherwise inside the shell or into the tissues of the mollusc's soft body. In such cases, the animal sometimes begins to deposit a part of the material which goes to form the nacreous layer of the shell around or over these foreign objects, and as new material is added year after year in the form of layers, these concretions which may at first be very tiny grow to be of a considerable size. And when this takes place in a shell with specially beautiful nacre such as that of the pearl-oyster, the result may be an object of great beauty, prized from ancient times as a priceless jewel. In this strange way, pearls, the handsomest products of Nature are produced.

Such being their origin, pearls may be formed in any kind of Mollusc, bivalved or spiral. And just as the nacre of different kinds of shells differs, so the pearls themselves vary according to the shell which produces them. Thus the pearls of the common oyster, the scallop and the giant clam are milky white and not very bright, while those of the

sea mussel are usually black. The chank and the conch shells, into whose pink mouth you have so often looked, produce the pink pearls which are brought from the Bahamas and the West Indies. These pink pearls are also found in several kinds of fresh-water mussels which are plentiful in some of the streams and lakes of America, Europe, China, and Japan. Most superb of all, however, are the products of the true pearl-oysters. These are the pearls which have always been called Oriental Pearls—"solidified drops of dew," the poets have named them.



Perfect round  
and Pear-  
shaped Pearls  
Actual Size  
Hewitt

Perhaps you have noticed that pearls are of many different shapes: some round, some pear-shaped, some egg-shaped, and some of very fantastic shapes indeed. The round, pear-shaped, and egg-shaped ones are known as *oriental* or *virgin* pearls, while those of irregular shapes are called *baroque pearls*. These are sometimes found in the shapes of fishes, birds' wings, or creeping worms. The *seed* pearls which are generally used as medicine by the Chinese, are always very small and usually found

together in numbers.



"Baroque"  
Pearls

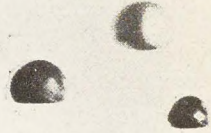


*'Twin Pearls'*

Sometimes two pearls will be found joined together by the nacreous substance, thus forming what is known as "***twin pearls.***"

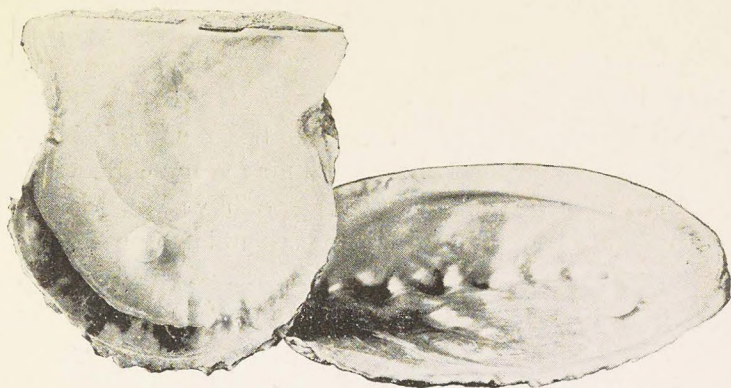
All of these kinds of pearls are called free pearls because they are found in the tissues of the animal's body and are not joined to the shell.

In the same way that twin pearls are joined together is sometimes happen that pearls are found attached to the inner surface of the shell. This position interferes with the symmetry of the pearl so that when it is taken out of the shell it is flat on one



*"Perles Boutans"*

side, making what is known as a "***perle bouton.***" The attached pearls are not always of inferior quality but are often highly valued. The world-renowned "Southern Cross," which was valued at £ 10,000 by the company to which it belonged, was found off Cossack, Western Australia, attached to the central part of the inside of a shell.



*Pearl-Oyster and Abalone with Culture Pearls*

## Culture Pearls

When once the nature of pearls was understood, it was but natural that many experiments should be made to produce the precious objects at will. In fact much attention has been paid to this very problem by scientific men, and they are still at work upon it.

Of course we do not here refer to the manufacture of "artificial pearls" such as the so called "Roman pearls," "Venetian pearls" etc., which are not pearls at all, but are made of glass and painted with fish-silver; rather what is referred to are the attempts to make the pearl-oyster work for man and produce natural and true pearls in a reliable and methodical manner—in short a kind of "harnessing" the mollusc for the service of man.

It is well known that Linnaeus, the "father of natural history," claimed that pearls could be procured by piercing holes in the shell of an oyster

with a fine auger, making a small wound, and afterwards "parking" the animal for many years. But his suggestions do not seem to have been clearly understood and no one has been able to pursue his method successfully. The Chinese as is well known have been specially successful in raising pearls by inserting grains of clay between the shell and the thin outer membrane which covers the soft body of the freshwater mussel; but the best of these are of very inferior quality, and are valuable merely as curios.

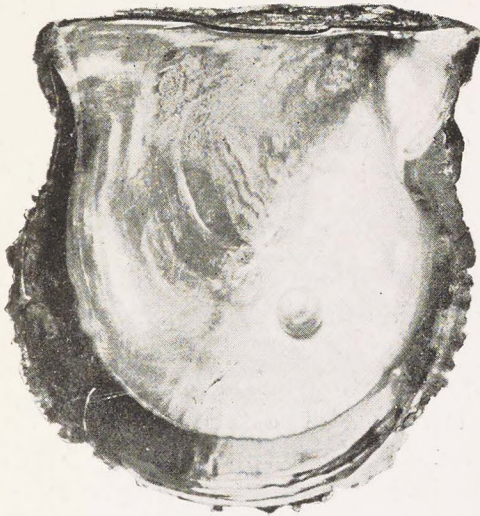
At the International Fisheries Exhibition held in Berlin in 1880, some pearls were shown which had been cultivated in Germany. From looking at these one could see that the plain relief might be covered with nacreous substance, but the result was of little value. Mr. Saville Kent, late naturalist to the government of Queensland and to that of Western Australia, undertook the same experiment with the large pearl-oyster, and a gentleman on Thursday Island tried inserting a shot through a hole in the shell.

The most important of such experiments are probably those of Dr. Louis Boutan of Paris, who succeeded some six years ago in producing pearls in the abalone shell. The public was naturally greatly interested, and the newspapers in Europe and America applauded his success and called it a great discovery.

It may perhaps come as a surprise to many that



before Dr. Boutan's attempts, a very extensive and successful system of pearl-oyster cultivation had been carried on in Japan by a Mr. Mikimoto, and "culture pearl" had not only been produced but placed regularly on the market. Even at the present day, it may be claimed that this is the only pearl-oyster farm in the world which undertakes the extensive cultivation of the precious mollusc and produces "culture pearls" on a commercial scale. An account of this successful enterprise may therefore be not wholly devoid of interest.



*Japanese Pearl Oyster with Culture Pearl*

*Hewitt*

## The History of the Japanese Culture Pearl

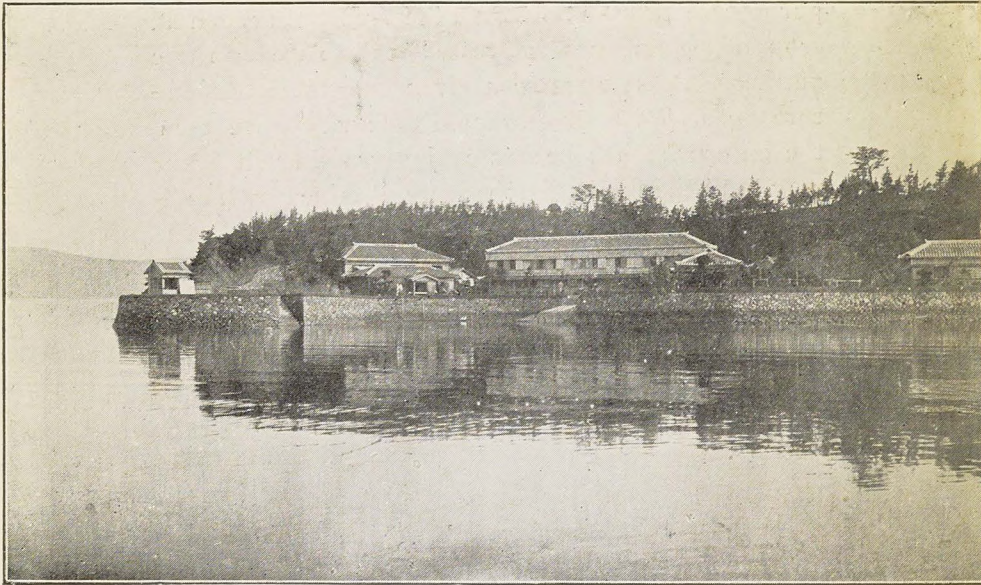
At the Third National Industrial Exhibition held in Tokyo in 1890, Mr. Mikimoto exhibited in the aquarium of the Fisheries section some living specimens of the pearl-oyster. This made him acquainted with Dr. Mitsukuri, professor of Zoology in the Imperial University, who first suggested to him the possibility of cultivating pearl-oysters and of making them produce pearls by the use of proper stimuli. Being deeply interested in the subject, Mikimoto went afterwards to the Marine Biological Station of the Imperial University at Misaki where the professor was staying, and learned from him many facts concerning pearl formation and the natural history of the pearl oyster.

Mikimoto's home was Toba in the province of Shima, one of the localities in Japan famous for large yields of pearls. Directly after his return there he began experimenting on his newly acquired idea. At first it seemed almost like pursuing a fleeting shadow and his friends laughed at him for "throwing his money into the sea." He, however, persisted, trying all sorts of experiments and changing his methods from time to time relying on suggestions and advice from Professor Mitsukuri and Dr. Kishinoue. At the end of four years of hard work, disap-

pointment and renewed efforts, some results were obtained which seemed to promise success. In 1896, things had so far progressed that the experimental stage was a thing of the past and the enterprise was put on a commercial basis. A patent for the new method was obtained from the government, and the cultivation of the pearl-oyster on an extensive scale was begun at the island, Tatokujima, in the Bay of Ago leased sometime before for the purpose. At the end of 1898, the first, though small, crop of pearls was harvested and placed on the market. These have been given the name of "culture pearls" by Professor Mitsukuri. Since then, the enterprise has been steadily growing in every way, and the skill and experience obtained by handling millions of pearl-oysters have enabled the establishment to maintain a constant improvement in the quality of the pearls produced.



*Women divers, the Ago Bay.*



*The Mikimoto Pearl Culture*



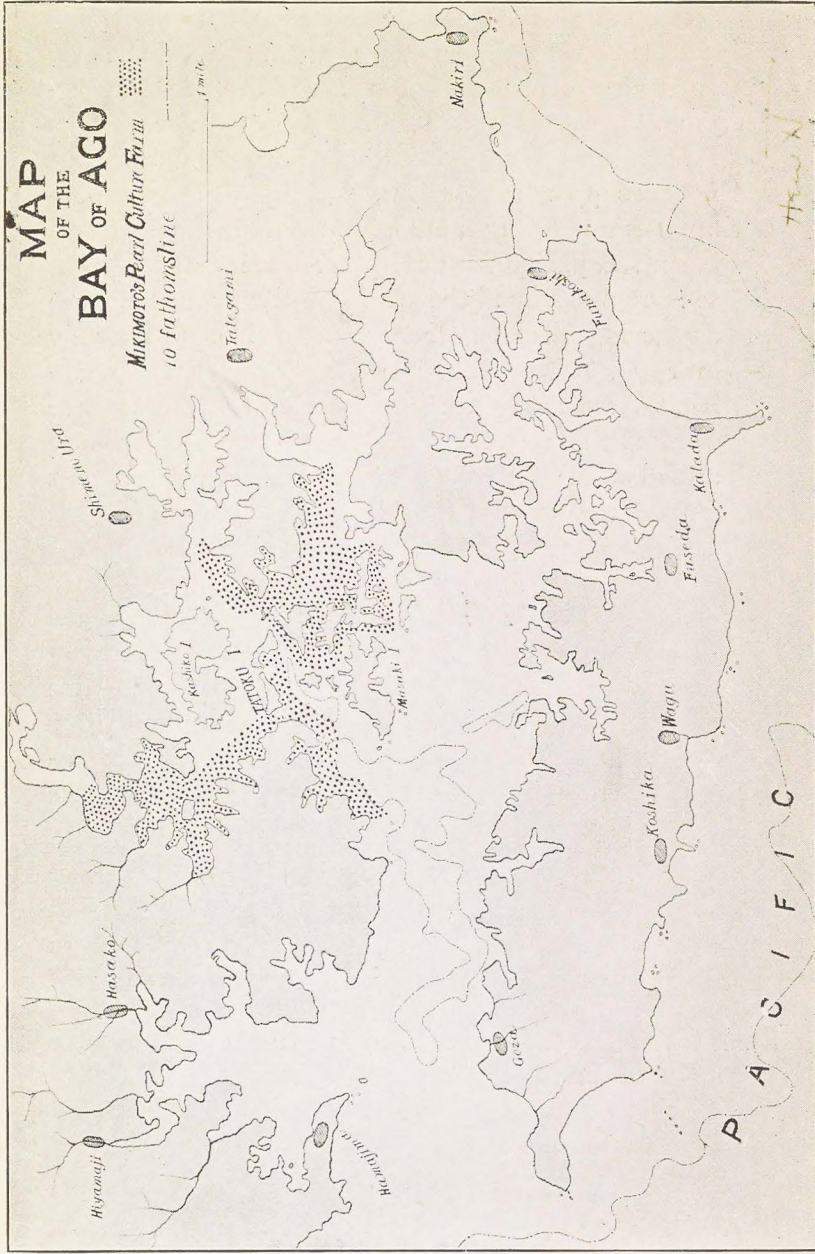
*Station, Tatoku Island. Ago Bay*



*View of a part  
of the Mikimoto  
Pearl-Culture  
Farm*

## The Mikimoto Pearl-Culture Farm

About a dozen miles south of the famous Shrine of Ise is the sheltered Bay of Ago, long famous for producing the best quality of pearls. It is a remarkably quiet body of water some six miles in length and three miles in breadth, with an average depth of ten fathoms, although it is over twenty fathoms deep near the entrance. The coast line is cut into with many deep and irregular indentations which, besides affording excellent shelter and ground for the pearl-oysters to thrive in, have the additional merit of making the scenery exceedingly picturesque. The fact that the "Kuroshiwo," the great "gulf-stream" of the Pacific, sweeps near by, is also undoubtedly an important factor in making this a favorite haunt of the precious mollusc.

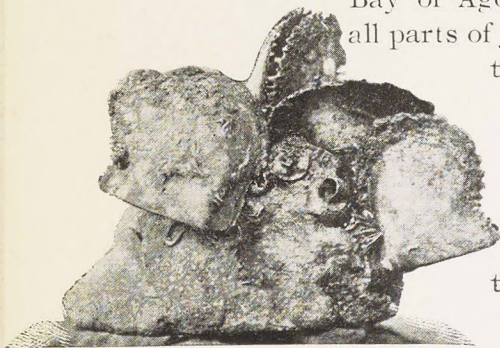


Somewhat to one side of the middle of the Bay towards the north is the small island of "Tatoku-jima," the center of Mikimoto's enterprise. When first taken possession of, it was uninhabited, but now it supports a flourishing colony of several dozen families and many hundred individuals all connected in some capacity with the pearl-oyster culture. The sea-bottom around the island was at first leased, the area being increased from time to time until finally in 1903, 1905, 1908, and also 1910, the Government recognizing the importance of the enterprise granted the use of a very large portion of the bay and also the Bay of Gokasho and Hasama so that at the present day, the whole of the sea area leased by Mikimoto extends for 50 nautical miles.

The pearl oyster cultured on these grounds belong to the species (*M. martensii*) abundant in the

Bay of Ago and found more or less in all parts of Japan. They closely resemble

the Indian species found near Ceylon, famous for producing the finest pearls in the world. These molluscs live at depth not exceeding seven fathoms, and are anchored to rocks, stems of algae etc., by threads which the animals secrete.



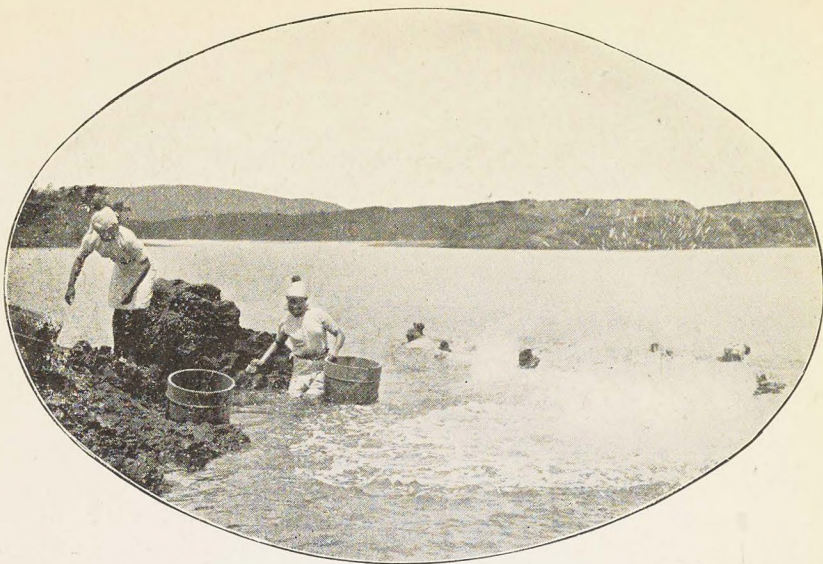
*Living Japanese  
Pearl-Oysters  
anchored to  
a stone*

The methods practised at Mikimoto's farm are as follows :—



Every year during the months of July and August, small pieces of rock and stone are placed in spot where the larvae of the pearl-oysters have been found to be most abundant. Soon small oyster-spat are found attached to them. As this takes place in the shallow waters of not more than a few fathoms, they would die from cold, if left there during the winter; so together with the rocks to which they are anchored they are removed to deeper waters and carefully laid out in beds prepared for them. Here they lie, until they reach their third year, when they are taken out of the sea, and undergo an operation which leads to pearl formation. This consists chiefly in introducing into them the small pearls or round pieces of nacre which are to serve as the nuclei of pearls. The shells are then put back into the sea and left undisturbed for at least four years more. At the end of that time, they are taken out, and it is found that the animal has invested the inserted nucleus with many layers of nacre and *has in fact produced a pearl.*

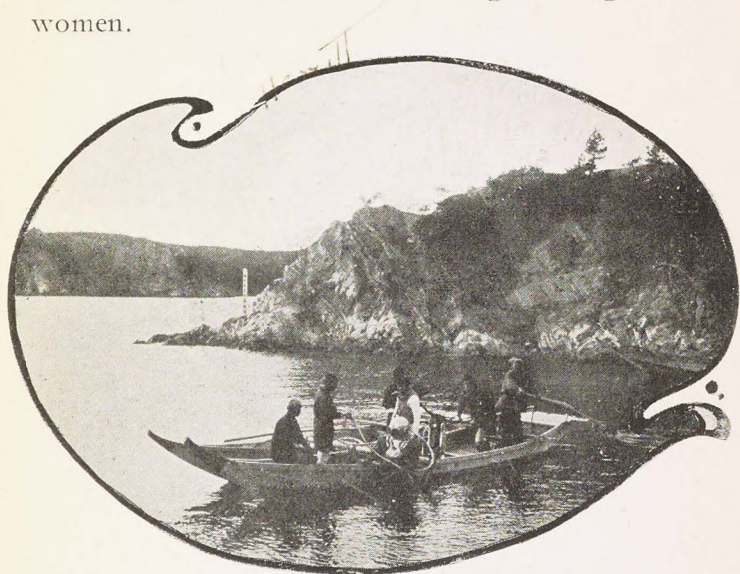
Pearl culture as we have described it may seem to be very simple, but in reality it is by no means an easy work. Large mortality among the pearl-oysters from various causes, the ejection of the inserted nuclei, the depredations of the oysters' enemies, uncertainties attendant upon long years of waiting, are some of the drawbacks which beset the industry. The most dreaded of all the evils is perhaps the invasion of the so-called "akashiwo" or "red current." This has



*Women-divers at Work on the Shore of Tatoku Island*

been ascertained to be due to an immense accumulation of microscopic organisms causing a discoloration of the sea-water. Wherever this appears, it is followed, for some reason not yet well understood, by a wholesale destruction of marine organisms, and when it invades the pearl-culture grounds, it may undo in one day the work of years. Another unwelcome intruder of the culture ground is a sea-weed called "Mirumo" (*Codium*), which if allowed to grow luxuriantly will cover up the pearl-oysters and stop their growth or even kill them by, so to speak, smothering them. Again the Octopus plays sad havoc among the pearl-oysters which it seems to consider a great delicacy. The Starfish is another animal which especially enjoys the meal of pearl-oysters.

It may perhaps interest the reader that a large part of the sulmarine work, such as the transplanting of the oysters, spreading them out on the beds, taking them out of the sea or putting them back there is done by women divers. This is universal in the Ago Bay and in many other parts of Japan. There has been a belief from time immemorial that women can work better and longer under water than men, and the women divers of Ise are often mentioned in classic literature. Perhaps this curious condition of things may furnish the modern student of social science an excellent opportunity to investigate the effect of the transference of the wage-earning to the women.



*Diver in diving suit getting off boats*

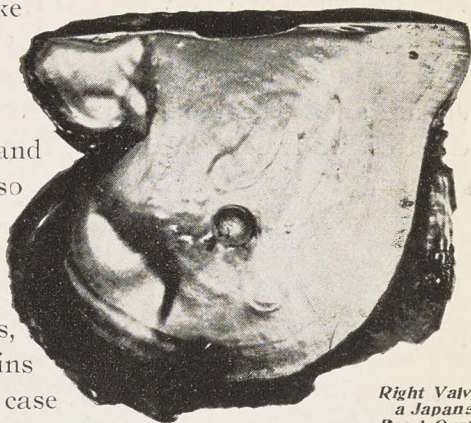
## The Japanese Culture Pearls

The "culture pearls" produced as described above are found to be usually attached to the shell, that is, they are to be classified as "perles boutans" and must be detached from the shell before they can be used. This to some may appear a drawback but the results, in successful cases are very fine. They look exactly like

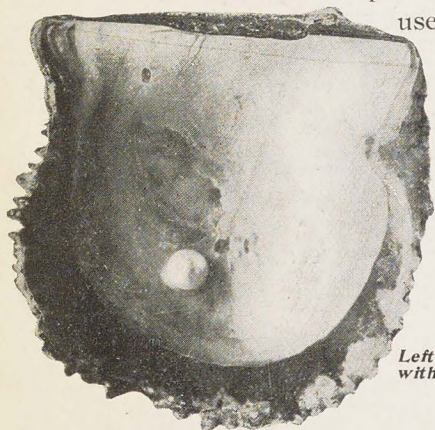
true pearls,— which in fact they are—not only in color, and lustre, but also in their perfect shape and symmetry. In rings, brooches, studs, scarf-pins and every other case where half pearls are

used, the "culture pearls"

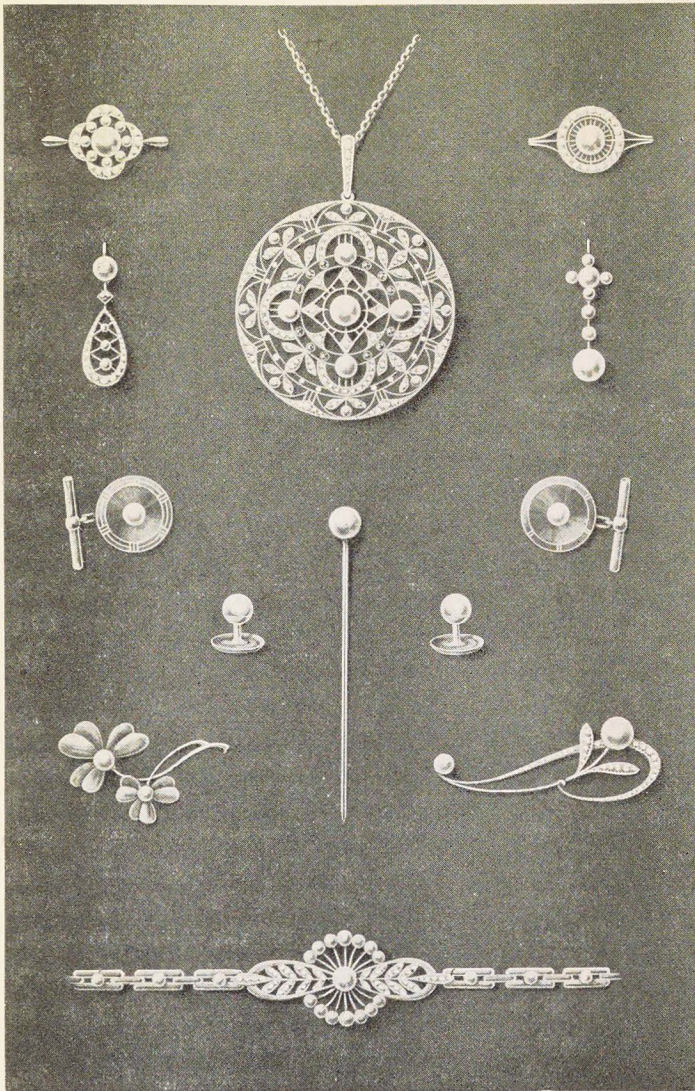
can be employed and will be found to meet the requirements perfectly.



*Right Valve of a Japanese Pearl-Oyster with Natural Pearl attached*



*Left valve of a Japanese Pearl-Oyster with Culture-Pearl in place*



*Jewels mounted with Culture-Pearls*

## Recognitions of Success.

The late Prince Komatsu did Mikimoto the great honour of visiting Tatoku Island and inspecting his pearl banks on the 21st December, 1900. After his return to Tokyo he sent a large silver cup on which was engraved in the Prince's hand-writing, "The Work of man helps Nature."

*How* In November, 1905, when His Imperial Majesty the Emperor was at Yamada for the purpose of worshipping at the great Shrine, Mikimoto was called specially to His Majesty's place of sojourn and was asked by the Minister of the Imperial Household about the history and the state of the Pearl Culture Industry.

In November, 1910 when His Imperial Highness the Crown Prince was at Y mada, he sent specially his Imperial attendants to Tatoku Island and inspected the pearl farms and the industry.

In May, 1911 when Her Imperial Majesty the Empress was at Yamada, Mikimoto had the great honour of showing the Majesty at Futami near Tatoku Island the state of pearl fishing and divers working for pearl fisheries. He had also the honour of being asked by her Imperial attendants about the history and the present states of the Industry. On the occasion the Majesty did Mikimoto the great honour of sending a set of 3 large silver cups on which was engraved the Imperial Crest.

The late Viscount Sone, ex-Residency General to

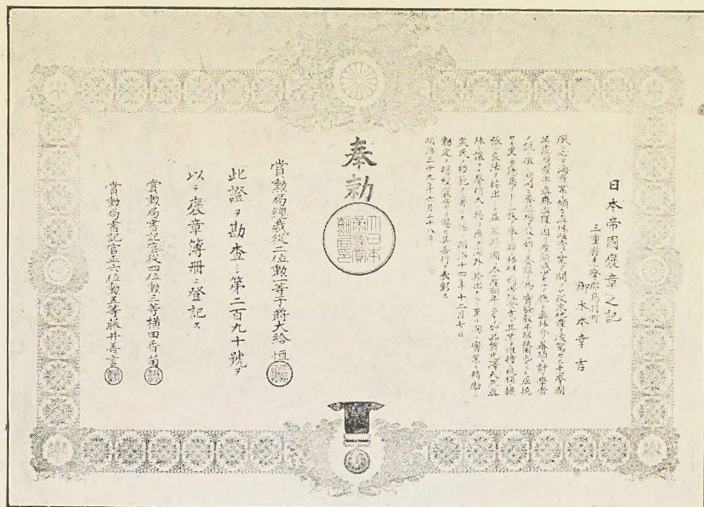
Korea; Baron Goto, ex-Minister of Communication; Viscount Kiyoura, and Baron Oura, ex-Ministers of Agriculture and Commerce; Count Hijikata, and innumerable other official and distinguished Japanese and foreigners have visited the Tatoku Island.

On the 21st June, 1906 the Bureau of Decorations of the Imperial Cabinet granted Mikimoto a Green Ribbon Medal, in accordance with the Imperial Order, for his energetic diligence in the Industry.

PRIZES AWARDED BY THE FOREIGN EXHIBITIONS.

1898 Norway Fisheries Exhibition.....	Silver Medal
1900 Paris Exhibition.....	Silver Medal
1902 Russian Fisheries Exhibition.....	Gold Medal
1904 St. Louis Exhibition.....	Grand Prize
1905 Liege Exhibition.....	Grand Prize
1905 Portland Exhibition.....	Gold Medal
1906 Milian Exhibition.....	Grand Prize
1909 Seattle Exhibition.....	Grand Prize
1910 Japan British Exhibition, London.	2 Grand Prizes
1910 Brussels Exhibition .....	2 Grand Prizes
etc. etc. etc.	

*Hewitt*



AWARD OF MEDAL

TO

KOKICHI MIKIMOTO,

Toba-Machi, Shima-gun, Mie-Ken.

Having early paid attention to the Marine Industry of Japan, K. Mikimoto became a dealer in pearls, and soon discovered the regretful fact that the pearl harvest in the Bay of Ago, Shima province, was becoming scanty owing to the excessive demand which the superior quality of the gems created. This caused him great concern, so with a view to cultivating the pearl oyster, he established a propagation station in the Bay in accordance with scientific principles. For several years his first experiments were only a series of failures. Not discouraged, however, he at last went to Tatoku Island with his family, and there devoted himself with untiring zeal to the improvement of this industry. As the dimensions of the business enlarged, he tried, by a new method, to increase the production of these gems of the sea.

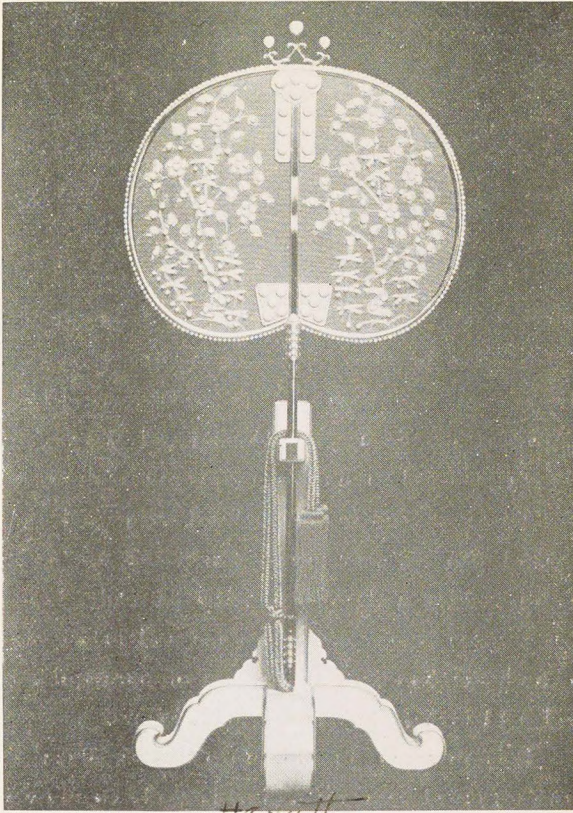
The pearls thus produced are now increasing in number year by year, and their quality and lustre are equal to any hitherto produced, thereby giving them a good reputation in the market, and creating a demand for them in foreign countries.

He has shown a good example to the public, by thus devoting himself to his business, and in recognition of his good work, K. Mikimoto is hereby granted a Green Ribbon Medal in accordance with the Imperial Order of the 7th day of the 12th month of the 14th year of Meiji.

The 28th day of the 6th month of the 39th year of Meiji.



豐太閣所用軍配扇模造



*Hewitt*  
"Gumbai Sen" (War Fan)

## “Gumbai Sen” or War Fan.

The Original of this “Gumbai Sen” was brought from Korea about 300 years ago and was possessed by Toyotomi Hideyoshi, our most noted hero. “Gumbai Sen” was used by generals when giving military orders in former times.

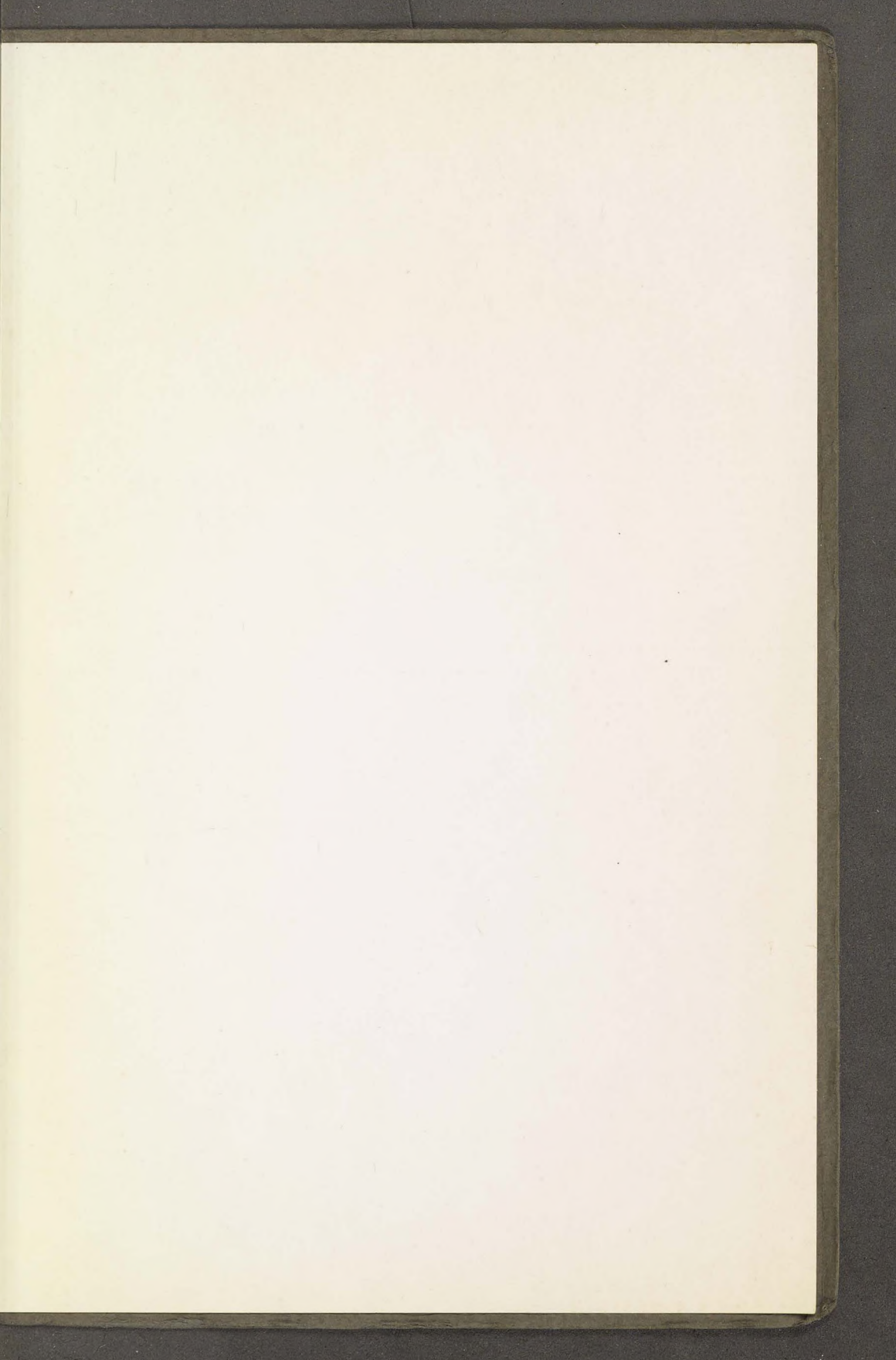
After being kept in the Myohoin Temple, Kyoto, it was presented to H. I. M. the Emperor. on July 13th, 1880, and was exhibited in the Tokyo Imperial Museum in 1901.

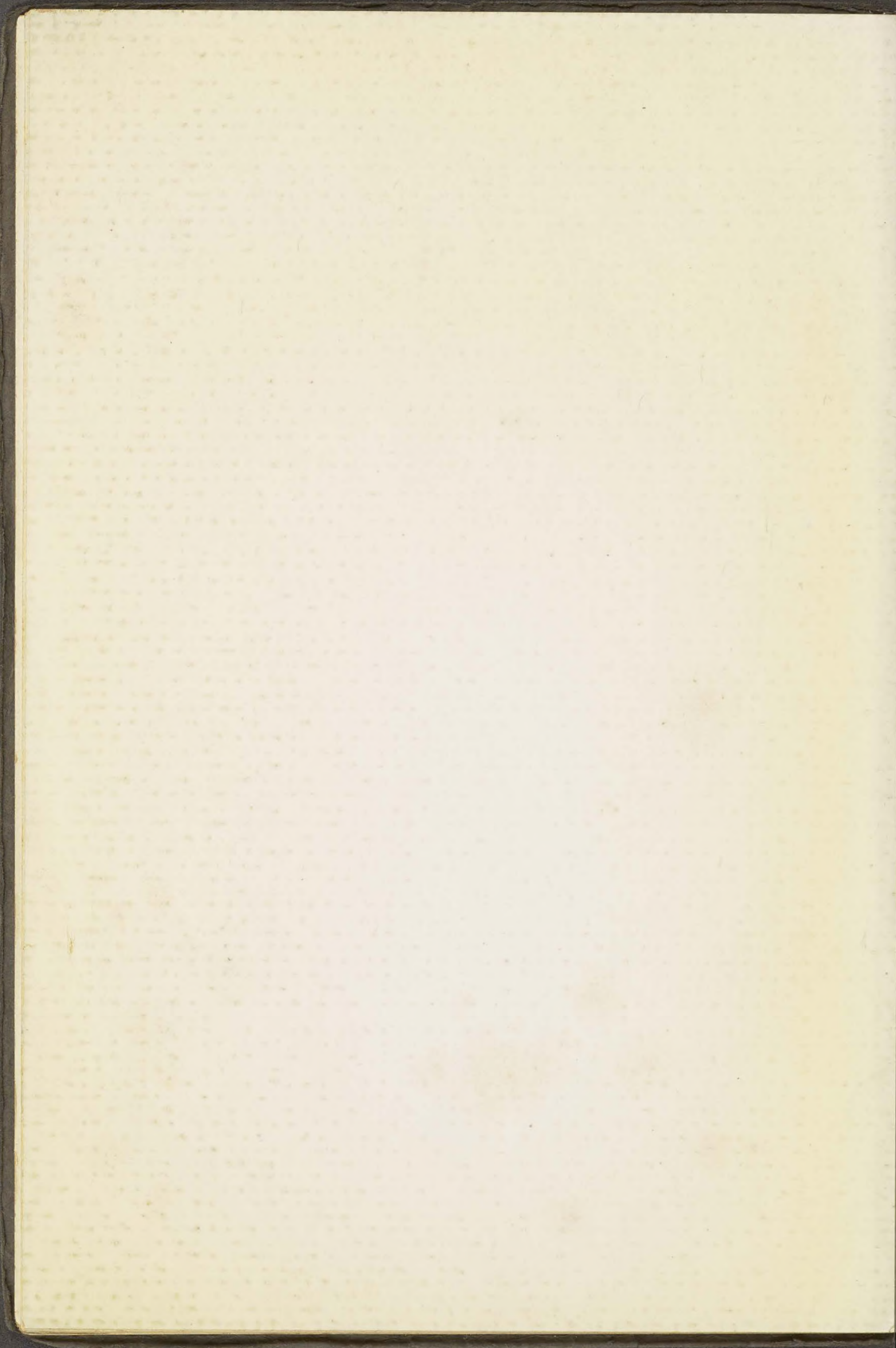
Mr. Mikimoto having seen it conceived the idea of making an exact copy of it using Japanese Pearls. He spent many years in selecting specimens of exquisite shape and lustre, and through the kindness of Mr. Matano, President of the Imperial Museum and Viscount M. Inaba, He was enabled to make a perfect reproduction of it.

This war Fan is embroidered with gold threads on a ground of a “Tsuzureno Nishiki” Silk, of Purple-Antique on both sides, and there are 515 Natural Pearls and 290 Culture Pearls of splendid colour and lustre mounted on it, and the handle, rim etc. are of pure gold, being the width 11 inches and the length 22 inches.

It is now kept in Mikimoto's store, Ginza, Tokyo, as his unequalled treasure and he is ready to show it to any visitors who desire to see it.

*the it.*





Hewitt

