



漬物

TSUKEMONO:

A Look at Japanese Pickling Techniques

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Introduction

When it was suggested to me to study food during my stay in Japan, I thought it was a wonderful idea. It was such an obvious choice for me. My whole life, I have always enjoyed traveling. Experiencing new cultures and seeing how the rest of the world lives has always been fascinating to me. Tasting each country's cuisine is always a major attraction for me. In my opinion, food is the best insight into a culture. By tasting the food in a culture, you can learn their history, geography, flora and fauna, local products, natural resources, technology and even the temperament and values of the people. For me, eating is not just for nourishment, but it is an experience into a culture.

Being a bit too broad, I needed to narrow down my topic of food. Within the first few days of my stay here in Japan, I began to notice that tsukemono was served at every meal. I saw that it is a staple food in the Japanese diet and so much more interesting than I first suspected. Perhaps in recent times, tsukemono is more popular as a souvenir that one brings back from a trip. However, tsukemono has a fascinating story and an important contribution to Japanese culture.

I cannot finish this introduction without thanking all the many people who helped me throughout my stay in Japan. All of my English students, the members of SEC and the staff at KIF have given me so much support. I would like to especially thank Junko Tomimoto and her mother Kishiko Tomimoto who were always willing to go out of their way to help in my quest for learning about how to make tsukemono.



"a bowl of rice with a small plate of pickles and some soup is not merely food, but cuisine..." – Michael Ashkenazi

What is Tsukemono?

Tsukemono 漬物 translates to 'pickled things' in English. When comparing our English word pickles, the only 'things' I can think of are our classic cucumber pickles. Things left in vinegar for a long time. Upon further reflection, I can come up with pickled beets, onions, eggs, and pigs' feet. Of course there is also my favorite, pickled okra. Pickled okra brings me memories of my aunt's collection of mason jars filled with okra, vinegar, garlic and hot peppers, curing in her garage. I guess even racking my brain further, I can think of sauerkraut and pickled herring. According to Dictionary.com, to pickle means "to preserve or flavor (food) in a solution of brine or vinegar" (Dictionary.com)

I love what we Americans think of as 'pickles', but tsukemono is so much more. There are a wide variety of methods that are used for 'pickling', or better yet, preserving vegetables. The earliest tsukemono were simply vegetables preserved in salt. However, throughout history, the Japanese have found wonderfully delicious innovative ways for preserving their vegetables. Vegetables are very important to the Japanese diet. Historically, during the winter months, especially in the northern part of Japan, fresh vegetables were scarce. Tsukemono became an important element in keeping a balanced diet during all months of the year.

Tsukemono can be compared with the cheeses in Europe. They are both fermented and preserved and as each region in Europe has its own variety of cheese, the same holds true in Japan (About Japan Series 32). Teppo-zuke is a specialty of Gunma prefecture, nozawana is popular in Nagano and takana is known in Kyushu. In Kanazawa, the tsukemono specialty called kaburazushi includes slices of turnip and fish together. In Akita, people even smoke their daikon radishes before pickling them with salt and rice bran. This is called iburi gakko or smoked pickles.

The varieties of tsukemono are endless and they are consistently served with rice, usually as the ending to a meal. "So invariable is their appearance that even after a full meal the Japanese find something missing until the tsukemono are consumed" (Richie 83).

Tsukemono History

As early as the Jomon period (14000-400 BC), people would take salt from the sea and use it to preserve meat and vegetables (“Tsukemono”). The exact origin of tsukemono is not known and I found many varying dates among different sources. However, each source sites the following story as a possible starting point for what we now know as tsukemono.

Kayatsu Shrine in Nagoya, also called Tsukemono Jinja (Shrine), is in a big agricultural area. Traditionally, the people living in that area harvested salt from the sea and grew many vegetables. Every fall, the townspeople would offer the salt and the vegetables from the first harvest to the god of the shrine. However, the offerings spoiled very quickly. So the idea came about to place the salt and vegetables together in a barrel and leave them in the Komotsu-den (Hisamatsu 6). They believed that the result, tsukemono, was a gift from the gods (“Tsukemono”). Still today, there is a festival every fall at this shrine to celebrate this offering to the god of Kayatsu Shrine.

A document found in Nara’s Todaiji temple and written in the fourth century A.D. describes various tsukemono. It explains “kusahishio and niragi, the former using a fermented pickling bed made from soy beans, koji yeast, and slat water, the latter being marinated in vinegar or sake” (Hisamatsu 6).

As different products were introduced into Japanese culture (for example miso, sake and soy sauce), varying techniques for making tsukemono appeared. “During the Edo Era (1603-1868), the tsukemono shop came into existence” (NY Food Museum). By 1836, there was a store that advertised for 64 different kinds of tsukemono (NY Food Museum). As time went on, the process, methods and tastes of pickling only became more and more sophisticated. Still today, there are innovative ways to modify, enhance and experiment with tsukemono.



Techniques for Making Tsukemono

Through my research, I've found that there are ten different methods used for making tsukemono. It seems that one can use any kind of vegetable imaginable as well as various kinds of fish, fruit and even some flowers.

Shio-zuke 塩漬け (Salt pickles)

Using salt to preserve food is the oldest and simplest tsukemono technique. It also seems to be the largest percentage of tsukemono consumption. Vegetables are salted and then pressed. Salt removes the liquid from the vegetable and in turn shrinks the nucleus of their cells. The shrunken nucleus gives the tsukemono its flavor. This is called shio goroshi 潮殺し or salt killing. Fresh vegetables still containing water will quickly begin to decay and lose their nutrients. By using salt to draw out the liquid, the vegetables can be preserved and the nutrients remain for a longer period of time ("Tsukemono"). Ichiyazuke or one-night pickles are also a form of shio-zuke that can be made overnight, hence the name. I experimented most with shio-zuke, it was a good starting point for my exploration. I chose cucumber and eggplant as the vegetables for my shio-zuke.



In addition, I attended a tsukemono making class where we made hakusai-zuke 白菜漬. Hakusai is called Chinese cabbage or Napa cabbage in English. The hakusai bunch is torn into fourths and set out in the sun for two or three days. This creates a sweeter flavor. Then, the hakusai is washed and each leaf is salted. The bunches are put into a container and a weight is placed

on top. After two or three days, konbu 昆布(a type of kelp), yuzu ゆず(a type of citrus fruit) and togarashi 赤とうがらし(a type of chili pepper) are added to the hakusai. The weight is reduced by half and the mixture is left to rest for another two days. Hakusai-zuke can be eaten straight as a tsukemono, but it can also be used to cook with. One recipe I found included sautéing pork in sesame oil and then adding hakusai-zuke, togarashi, konbu, yuzu, sake and soy sauce (“Tsukemono”).

Another tsukemono in the shio-zuke category is umeboshi 梅干. Ume 梅 is known in English as Japanese plum. However, it is actually more closely related to the apricot. Sometimes one will see the translation as Japanese apricot. Boshi comes from the verb hosu 干す, which means to dry. After being salted and pressed, umeboshi is sun-dried for three days.

Umeboshi was used in the Muromachi era of Japan (1336-1573), the age of the samurai. At this time, tea ceremonies were developed as a time of peace for the warriors. The umeboshi was used to balance sweets with saltiness. Umeboshi was originally developed for the traveling warriors. The warriors ate umeboshi to prevent disease as well as a source of energy to revitalize them on long journeys (“Tsukemono”). Even then, it was recognized that salty foods were needed when walking long distances. On my journey up Mount Fuji I brought dried umeboshi with me as a source of energy and I saw many other fellow hikers snacking on individually wrapped umeboshi.

In June, the ume are ready and harvested for pickling as well as a variety of other uses. The local supermarkets, in the Japanese spirit of celebrating seasonal foods, create large displays for customers interested in making their own umeboshi. After finding out there was a class about making homemade umeboshi, I decided to give it a try. The initial class took place on June 15 and my last day of drying was July 26, so the whole process took over a month.

Perhaps the best way to chronicle my adventure in making umeboshi is through pictures. So here we go!

The starting ingredients include:

3 kg unripe ume 梅

360 g salt

50 cc shochu 焼酎(Japanese white liquor)

After washing the ume 梅, the leftover parts of the stem are picked out with a toothpick. It is also important to look at each ume and make sure it is in good condition.



Next, a smidgen of shochu is used to wipe the inside of the container that will hold the future umeboshi. The purpose of this is to serve as a form of sterilization. In a bowl, 25 cc of shochu and 150 g of salt are added to 1.5 kg of ume. The whole mixture is then tossed to evenly coat the ume. These ume are placed in the holding container and the process is repeated with the remaining 1.5 kg. Finally, the remaining 60 g of salt is sprinkled across the top of the ume.



After being salted and 'shochu-ed', a weight is placed on top of the ume and they are left to sit, or as they say in Japanese 'put to bed', for quite some time. However, it is important to check on the ume everyday to supervise their progress and give them a shake to move them around some. This way, one can check for and

prevent any mold that may appear. Ume has high citric acid content and is rather resistant to mold, but it is still important check on them daily. After a few days, the salt will begin to draw out the liquid from the ume.



Umeboshi are usually seen with a reddish or purplish tint to them. This color comes from the addition of red shiso 紫蘇. Shiso is known as perilla, in English, and it is a member of the mint family.

Ingredients used to prepare the shiso:

1 package of red shiso

40 g salt

50 cc ume liquid (from the weighted ume)



First, remove the stems of the shiso. Then rub the shiso leaves with 20 g of salt. A dark purple liquid will come out. Discard this liquid and repeat the process with the other 20 g of shiso. After discarding this liquid too, add the 50 cc of ume liquid from the container of weighted ume. Once the liquid being drawn out from the ume rises above the weight, it is time to add the salted shiso.



Continue to let the ume rest with a weight on top until after the rainy season is over. In Japan, the rainy season lasts from about June through about July. I



remember asking everyone when the rainy season would end and the response was always 'when the weathermen say it's over'. This year it ended around July 20. The next step in the umeboshi process is to dry them. I heard varying opinions on how to dry them. Some told me three nights and three days, others told me 3

days and place them back into their juice at night. The directions I received from my class told me to place them back in their juice at night, so this is the process I followed. I placed the ume on bamboo draining baskets and diligently turned them each over once a day.



Umeboshi has a very sour and salty taste. It is said to be very healthy and to aide in digestion. Usually it is consumed in small portions with rice. However, being one of the most popular forms of tsukemono, umeboshi has found its way into many culinary dishes. I have heard recipes that include it as a sauce for pasta. In addition, umboshi can be cooked with sugar and sake to create umebishio, which is similar to a jam. One recipe that I tried included cooking umeboshi with pork.

Steamed Pork with Umeboshi

Ingredients:

6 umeboshi
300g (10 oz) sliced pork
cornstarch or katakuriko
2 1/2 T red miso
2 T sake
2 T sugar

Directions:

1. Prick the skin of the umeboshi with a fork. Soak in water to remove the salt.
2. Cut pork into bite-sized pieces. Dust with cornstarch or katakuriko.
3. Remove the seeds of umeboshi. Chop stoned umeboshi, mix with red miso, sake and sugar.
4. Mix pork with #3 in a bowl.
5. Lay pork flat on a dish, steam over high heat for 20 minutes.



From: Quick & Easy Nutritious Japanese Cooking no.3: Health Food, Fruit, Nuts and Seafood. Tokyo: Joie, Inc., 1984.

Su-zuke 酢漬け (Vinegar Pickles)

Like in the United States, vinegar is also used in Japan as a method to preserve food. Vegetables are left to cure in a vinegar pickling bath. One common su-zuke is called beni shoga 紅生姜. This tsukemono is made from ginger and is bright red in color. It is commonly served with yaki soba, okonomiyaki, gyudon and tako yaki.



obtained from wikipedia.org

Another interesting su-zuke is called saba su zuke. Saba or mackerel is marinated in vinegar.

Amasu-zuke 甘酢漬け (Sugar and Vinegar Pickles)

Very similar to su-zuke, amasu-zuke is distinguished by the addition of sugar to the pickling marinade. Maybe the most popular amasu-zuke is gari ガリ or pickled ginger. This tsukemono is served alongside sushi. The best gari I have ever tried was given to me by Mr. and Mrs. Mizuno. The ginger was very tender and the taste was light and refreshing. Sometimes gari can be a bit harsh and, depending on the age of the ginger, overpowering. However, this recipe is a delicious one.

Gari

Wash and chop 4 kg of fresh ginger. Let the ginger soak in salt water for two or three hours. Bring 2 kg of sugar and 900 cc of vinegar to a boil. Allow the mixture to cool and then bring to a boil once more.

Pour the mixture over the fresh ginger and allow it to cool. Place into a covered container and keep it in the refrigerator for seven to ten days.



Namasu 膾 is another form of amasu-zuke. This involves thinly slicing daikon radish and carrots and allowing them to marinate in a combination of dashi stock (a stock made by boiling kelp in water), vinegar, sugar and sake.



Miso-zuke 味噌漬 (Miso Pickles)

Miso 味噌 (fermented soy bean paste) is also used for preserving foods. Miso-zuke originated when farmers would bury salted vegetables with the miso they were making for their families. This process is over 1,000 years old (Food Forum Kikkoman). These tsukemono can take a long time to mature, sometimes even years (NY Food Museum). Miso is mixed with sake to create a pickling bed and vegetables are buried in the miso mixture. Fish can also be used to make miso-zuke. I tried a recipe for making garlic miso-zuke.

Garlic Pickled in Miso (Ninniku no miso-zuke)

1 kg garlic, skin removed from cloves

1 kg miso (any kind)

1 cup sake (or 1/2 cup sake and 1/2 cup mirin)



Place the garlic cloves in a hot steamer and steam for 15 minutes. Cool and pat dry. Blend the miso and sake. Place the miso mixture in a refrigerator container and imbed the garlic cloves in the miso. Cover and refrigerate for 2-3 weeks. Wash off miso before serving. Serve chilled or at room temperature. Keeps 1 month refrigerated in an airtight container.

From: Yamaguchi, Eri. The Well-Flavored Vegetable. Tokyo: Kodansha International, 1988.

Shoyu-zuke 醤油漬 (Soy Sauce Pickles)

Perhaps the most common shoyu-zuke is fukujin-zuke. This includes seven different kinds of vegetables which are salted and then pickled in soy sauce and mirin (sweet sake). This type of pickle is usually served with curry and rice (NY Food Museum). My favorite type of shoyu-zuke includes burdock root. Of course, I also enjoy this recipe that was given to me by Mrs. Shimada.

Pickled Daikon Radish

500 g daikon radish

Peel and cut them into 1 cm slices like ginko leaves.

20 g dried bonito flakes

Put bonito in a pan. Roast them for 3 minutes over medium heat, stirring with chopsticks. Cool down and crush them in your hand.

Seasoning: (T=15 cc)

4 T soy sauce

2 T mirin (sweet sake)

2 T vinegar

Combine all in a plastic bag. You can eat after 30 minutes.

Kasu-zuke 粕漬 (Sake Lees Pickles)

Sake lees are the leftover solids after the fermentation process that produces sake. Effectively, they are the sake dregs. Instead of discarding these leftovers, the Japanese have efficiently created a way to use them as a pickling agent. This technique is over 1,000 years old and developed with the sake brewing industry (Food Forum Kikkoman). Kasu-zuke has a strong flavor and the sake can definitely be tasted. I think they have a sweeter taste, which is a contrast to the salty or sour taste of many other tsukemono. Perhaps the most famous kasu-zuke is nara-zuke. These tsukemono include different types

of melons, cucumbers and gourds pickled in the sake lees. The origin of nara-zuke comes from the Buddhist priest Nara. About 1,200 years ago he discovered this form of pickling and presented his tsukemono to the imperial family. They, in turn, named the tsukemono after him (Kansai Window).



Obtained from <http://hsuchuanfoods.blogspot.com>



Nara-zuke at Kyoto's Nishiki Market

Koji 塩麴 (Malted Rice)

In English, koji translates to malt or fermentation starters. Koji is a type of fungus or mold that is also used to make sake, mirin, soy sauce and miso. Perhaps the most famous tsukemono using koji is bettara-zuke. Daikon radish is pickled with sugar, koji and shochu. Bettara-zuke has a sweet flavor.

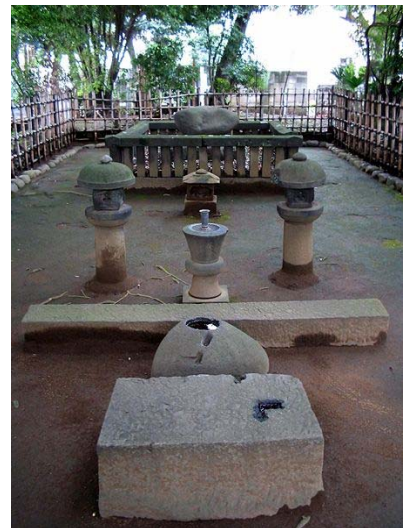


Obtained from <http://hsuchuanfoods.blogspot.com>

Nuka-zuke 糠漬け (Rice Bran)

The idea of tsukemono, pickling things, originally came from China many ages ago. However, the technique of using rice bran as a pickling agent is purely a Japanese creation (“Tsukemono”). The invention of nuka-zuke brought a revolutionary change in the history of tsukemono and in the dietary lives of Japanese people. In the Edo Era (1603-1868), removing the hull of the rice to create polished white rice was very popular. Therefore, many people whose diets consisted of mainly white rice had a deficiency of vitamin B1. As a result, many people suffered from beriberi disease. This disease is a nutritional disorder and the symptoms include weight loss, emotional disturbances and can cause heart failure as well (Wikipedia). By using the rice bran as a pickling bed for vegetables, people were able to increase their intake of vitamin B1. Compared with fresh vegetables, the vegetables in nuka-zuke have three to twelve times more vitamin B1. Thus many lives were saved with the consumption of nuka-zuke (“Tsukemono”).

One of the most popular tsukemono, takuan 沢庵, is a member of the nuka-zuke family. The vegetable used in making takuan is daikon radish. First, the daikon radish is dried and then it is placed in the rice bran pickling bed or nuka-doko ぬか床. Takuan gets its name for the Buddhist monk who invented it. Takuan Soho lived from 1573-1645 and was quite popular in his time. He invented takuan because of his concern that too many people were eating white rice and lacking proper nutrients (“Tsukemono”). His legacy lives on through his tomb. There is a stone placed on his tomb resembling a stone weight one would put on a pickling container.



obtained from <http://commons.wikimedia.org>

Apart from shio-zuke, I experimented most with nuka-zuke. I attended a tsukemono making class where we created our own nuka-doko (rice bran pickling bed). We first started with 1 kg of rice bran. To that we slowly added salt water, mixing the rice bran and salt water until achieving the correct consistency. Next, we added cabbage leaves, togarashi (hot chili pepper) and

older nuka-doko. The togarashi prevents insects from entering the nuka-doko and the older nuka-doko starts the fermentation process and encourages the bacteria to grow! The nuka-doko is kept at room temperature to allow the growth of bacteria. It is like a small factory. The nuka-doko absorbs water from the vegetables and the moisture creates an environment that allows lactobacillus to grow. Then the lactobacillus is absorbed back into the vegetables along with other nutrients including vitamin B1. Lactobacillus is good for the stomach and intestines (“Tsukemono”). The benefits are similar to yogurt. However, the Japanese diet is geared more towards vegetables than dairy products therefore, nuka-zuke suits the Japanese diet better.

Nuka-doko has a sour smell that comes from the bacteria living within it. As a result it can be a bit unpalatable for some people. Since this lactobacillus is living and growing in the nuka-doko, it is important to stir the nuka-doko at least once a day. It is best if you can stir it twice in the summer. It is necessary to use your hands and make sure to mix it well from the very bottom. Of course, you will want to mix it with clean hands, but the bacteria on each person’s hand are different. Therefore, it is said that each nuka-doko has a unique flavor owing to the differences in each person.

Because of the rice bran, vitamin B1 is absorbed into the vegetables and as mentioned the lactobacillus is also absorbed into the vegetables. So depending on the ingredients added to the nuka-doko, you can add a variety of nutrients to the nuka-zuke. Add nails and infuse extra iron into the vegetables, seashells and eggshells add calcium and so on. You can also add beer, garlic, or konbu (kelp) for different flavors (“Tsukemono”).

I experimented with several types of vegetables when making my nuka-zuke:

Bamboo Shoot



Turnip



Cucumber



Karashi-zuke からし漬 (Hot Mustard Pickles)

Karashi からし or hot mustard is combined with sake lees and used as a pickling agent. One example of karashi-zuke is karashi-nasu からしなす, which uses Japanese eggplant (nasu) as the vegetable to be pickled.



Obtained from <http://hsuchuanfoods.blogspot.com>

Sato-zuke 砂糖漬 (Sugar Pickles)

Finally, sugar can be used in the tsukemono process. Combine sugar and salt to serve as a pickling agent. Use cucumbers as a vegetable and let it rest for two days.

“Fragrant Dishes”

Tsukemono is also known as konomono, oshinko or okoko, all meaning “fragrant dish” (Hisamatsu 6). Tsukemono along with soup and rice serves as the basis for Japanese cuisine. When talking about Japanese cuisine, you must understand tsukemono (“Tsukemono”). In the Kamakura era (1185-1333), the idea of having one soup, one vegetable (tsukemono) and rice as a staple diet was born. It is called ichi ju issai 一汁一菜. This meal is well balanced and includes the nutrients a person needs. The Japanese have created tsukemono as a way to consume enough vegetables, but tsukemono has developed into a delicacy as well as a medium for creating innovative dishes (“Tsukemono”). I think that many times tsukemono is over-looked on the plates of many people, but through my investigations I have found how interesting, fascinating and versatile tsukemono is.



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