

# Physical and Mental Treatment of Tōji and Local Touristic Strategy in Beppu

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**Abstract**—Beppu hot spring provides medical treatment as well as comfort visitors and mental easiness for many years. This paper studies hot spring in Beppu and Tōji, medical treatment in hot spring, and investigates how people's visit to Beppu has changed with Tōji, and how Beppu Tourism Office tries to regain visitors in Beppu. In this paper, firstly, hot spring history in Beppu will be explained especially focusing on Beppu Hattou (eight major hot springs) and Jigoku Meguri (eight major hell hot spring tours). Secondly, Tōji, a long-residential hot spring with the purpose of medical treatment along with the information about chemical efficacy of hot springs will be analyzed. Then, finally, the change of the long-stay type to short-stay Onsen programs with the combination of multiplex tourism resources will be focused along with the decrease of Onsen or hot spring visitors. It is concluded that Tōji is not only physically and mentally cure people but also bring people mental easiness and release them from their stressful life. All in all, it can be concluded that because Onsen is involved in people's life in Beppu and keep local people united in the community. Tōji's attraction is shown when local people try to create the new type of Onsen program so as to keep their traditional way of Tōji.

**Keywords**—Hot spring, Tōji, Treatment

## I. INTRODUCTION: HISTORY OF HOT SPRING IN BEPPU

BEPPU, a famous hot spring town, is located in the central part of Oita, on the coast of Beppu Bay facing the sea with Mt. Tsurumi. Hot water flows out from many spots in the city. It is the richest hot spring source in Japan with the greatest variety of hot springs [1]. The singular "hot spring" is referred as collective term such as "Kannawa Hot Spring", while the plural "hot springs" are taken into account of each hot spring's source.

There are 2,909 hot springs venting within the city, and they account for more than 10% of the 27,644 hot springs venting in Japan according to the survey conducted by the Ministry of the Environment in 2004 [2]. Even more, in the twentieth century, the US President Franklin Roosevelt is said to be suffered from paralytic illness, and he used hot spring treatment for his illness [3]. So, hot springs have played an important role in healing and medical treatment widely for a long period of time.

Beppu is described as an Onsen hot spring resort area in the historical records written as far back to the eighth century [4]. It is also said that Emperor Daigo visited "Shibaseki Hot Springs" in 895 and Emperor Goreishō in 1044 [4]. From that time, Beppu has played one of the center roles in the Japanese bathing culture.

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Shibasaki Hot Springs, is also famous for the method of extracting "Yu no hana" which literally means "flower of hot spring," which represents sediment of sulfur. In the Myōban Hot Springs area, "Yu no hana" or bath salts has been extracted from hot spring vapor for 300 years since the Edo era and it is designated as a national important intangible folklore asset [1, p.209].

About 140 years ago during Meiji era and about 100 years ago in Showa era, Beppu became the largest hot spring resort in Japan. Moreover, modernization of medical treatment, establishment of residential-type Onsen treatment facilities have been proposed by a German doctor Erwin von Baeltz. According to Yasui, Dr. Baeltz contributed the Japanese modern medical. Baeltz is known as a creator of "Baeltz Water" which is mixed with alcohol, glycerin, caustic potash, etc. to cure chilblain [5]. However, the plan has not been accomplished. It was after Showa era when medical treatment became more popular.

In 1912, an army hospital was built in Beppu, and in 1931, then, the first Onsen research center was established [6]. Thus, during the times of Meiji, Taisho, and Showa eras, hot springs became increasingly utilized for their medicinal properties. Many farmers and fishers stayed for a long time of period in their off-season. Thus, more people flocked to Beppu to receive medical treatment.

## II. HOT SPRING LOCATION IN BEPPU

According to the statistics from Beppu Seikatsu Jyōhou Guide Book, it is shown that more than 130,000 tons of hot spring water gushes from the ground every day [7]. This is the largest amount of hot spring water discharged in Japan, and Yellow Stone in the USA is the world largest [8].

In Beppu, hot springs pour out as much as 95,330 liters of hot water per minute and are the most poring amount in the world [7, p. 1]. According to a hot spring critic, Michio Ishikawa, Beppu is also an area blessed with various types of hot springs; it boasts ten types of the eleven classified types of hot spring water [4]. There are eight groups of hot springs within the city known as the 'Beppu Hattou,' which means the eight groups of hot springs in Beppu. 1. "Beppu Hot Spring" has developed in the central city area around Beppu train station. 2. "Kannawa Hot Spring" still remains the traditional hot-spring cure culture. 3. "Kankaiji Hot Spring" offers a breathtaking bird's eye view of Beppu Bay. There are "Yu no hana" huts where hot spring bath salts are produced, and they can be seen from 4. "Myoban Hot Spring". There are also 5. "Shibaseki Hot Spring", 6. "Hamawaki Hot Spring", 7. "Kamegawa Hot Spring", and 8.

“Horita Hot Spring”. All these hot springs have unique spa resorts with their own characteristics [9].

### III. HOT SPRING'S CHEMICAL EFFICACY

Based on chemical efficacy, category of hot springs in Beppu can be shown as follows.

TABLE I  
CHEMICAL EFFICACY IN HOT SPRING [10]

Chemical Efficacy	Names of Hot Springs
Carbon Dioxide	Beppu Hot Spring
Hydrogen Carbonate	Beppu Hot Spring, Hamawaki Hot Spring, Kankaiji Hot Spring
Chloride	Beppu Hot Spring, Hamawaki Hot Spring, Kannawa Hot Spring, Kamegawa Hot Spring
Hydrosulfate	Kannawa Hot Spring, Shibaseki Hot Spring
Ferruginous	Kannawa Hot Spring, Kannawa Hot Spring, Shibaseki Hot Spring
Aluminiferous	Myōban Hot Spring
Cupriferous and Ferruginous	Myōban Hot Spring
Sulfur	Horita Hot Spring, Myōban Hot Spring
Acid	Horita Hot Spring, Myōban Hot Spring

According to Kyushu Honmono Onsen 4, Beppu has the largest types of chemical efficacy [11]. Based on the above efficacy, visitors are able to choose their best hot spring for treatment. However, local people just visit and enjoy different types of hot springs with ease.

Beppu Hot Spring is famous for simple spring, salt spring, alkaline spring, and bicarbonate-earth spring. Hamawaki Hot Spring is for hydrogen carbonate spring, and chloride spring. Kankaiji Hot Spring is simple spring, baking powder salt spring, and is effective to neuralgia and rheumatism. Horita Hot Spring is famous for Tōji, and has abundant amount of spring, and is acescence low tonicity high hot spring and sulfur spring.

Another hot spring, Myōban Hot Spring is famous for geothermal area, and is known as a production of “Yu no hana”. Myōban Hot Spring has acidic hydrogen sulfide spring, and iron vitriol spring, and is effective to neuralgia, rheumatism, and skin disease. “Yu no hana”. “Yu no hana” technique started in Edo period. Firstly, stone pavement such as cobbles was bedded so that hot spring gas could be evenly gushed out. On the stones, blue clays (montmorillonite) was covered, thatched hut with triangle-shape roof was made [10]. Then, vapor from underground gas entered into montmorillonite between cobbles and crystal of gas and montmorillonite was created. The crystal called “Yu no hana”, grows about one millimeter per day. After forty to sixty days, it is extracted, defecated, dried and produced.

Another Beppu Onsen Hoyou Land has mud spring which is good for skin. Shibaseki Hot Spring is famous for ferruginous spring and hydrosulfate spring. Lastly, Kamegawa Hot Spring has natrium and chlorid spring.

With Onsen medical treatment, shrinked muscles have been warmed little by little. Detoxication can be effective, and the body is warmed. Blood vessel can be cured, autonomic is adjusted, hormonal secretion can be well-balanced, and immune bodies are made. As Chinese medicine has these effects, metabolize can be improved, and battles illness.

### IV. PHYSICAL AND MENTAL TREATMENT IN TŌJI

In Beppu, many people come for “Tōji”. It literally means, “cure with hot water” [12]. Tōji is a Japanese tradition to spend a long period of time in an Onsen town for the purpose of physical and mental recuperation. Tōji is one of the Onsen therapies by taking baths and drinking Onsen hot water, but drinking Onsen water easily causes digest problems, so it is better to drink Onsen water recommended by doctors' advice. Looking at the oldest description of Tōji, it was written in “Kojiki” and “Nihon shoki” [13]. Gradually, Onsen has been utilized as physical treatment. It is said that in 1289, a famous monk Ippen stayed in Kannawa Hot Spring [14], and opened Tōjiba where people stay for a long period of time as the purpose of Tōji [15]. Soon in the thirteen century, a local warrior, Ōtomo Yoriyasu established Onsen magistrate's office in Hamawaki Onsen in Beppu [16], and warriors came to stay for treatment of wound after wars. In 1925, Onsen therapy started. In the sixteenth century, the general, Hideyoshi Toyotomi, made his subordinates bring hot spring water in Arima, Hyogo, to Osaka Castle [17]. Moreover, a hot spring area where is called Tōjiba. Guests cook by their own, because sometimes they have restriction of daily food, and they sometimes enjoy their daily food instead of luxurious food. There are communal kitchen facilities in Tōjiba, where guests can cook with the heat of hot spring, and sometimes they can lend pots and pans, plates and utensils, and buy cooking ingredients such as vegetables and meat, and fish at Tōjiba. Or you can bring your ingredients at home, or go to grocery supermarkets, or go to the early-morning market. In this way, people can enjoy cooking besides recuperating themselves in Tōjiba. The cooking way of working with hot spring vapor from Onsen is called “Jigoku-gama”. Cooking various kinds of vegetables such as cabbage, carrots, pumpkins, onions, etc., and fish, meat and eggs (Onsen Tamago) or pudding or steamed pork buns in bamboo pans, you can use and enjoy cooking by yourself. Accordingly, Tōjiba is a small scale area where people just quiet themselves as the purpose of mental recuperation and physical treatment. It is possible to say that Tōjiba is where you can truly experience the old traditional Japanese bathing culture and enjoy Onsen culture.

In local community of Onsen, Tōji has been blended in to its community. People daily go to Onsen, and meet people in local hot spring daily. However, Onsen had been for physical treatment for people in high social rank, and wounded warriors in wars. In Edo period, people visit Onsen for the treatment of fatal disease. Presently, Onsen is used for a shot-time or single-day bathing, however, traditionally, Onsen is for people who needed to cure for a long period time for fatal disease such as cancer, skin disease, etc.

### V. ECONOMIC DEVELOPMENT ALONG WITH HOT SPRING

Beppu has played a leading role in the domestic tourism industry. By putting efforts into maintaining transportation networks, introducing the Jigoku Meguri Tour and the first female tour bus guides in Japan, which a famous businessman, Kumahachi Aburaya introduced. If you want to see how he

looks like, Kumahachi's stature is jumping with a kid in front of Beppu train station. Anyway, accordingly, the factors of hot spring and related hot spring business pin Beppu down as a symbolic hot spring resort that has contributed to the modernization of Japan.

In Beppu, "ryokan" (traditional Japanese inns), hot spring resorts, villas, and other historical buildings constructed between the Meiji era and the early Showa era have been preserved and are being utilized. In addition, Onsen is a part of daily life for people in Beppu. There are close to 200 community hot spring baths in Beppu city [10] and many citizens use them every day. Community hot spring baths are often attached to community centers in Beppu. They form the center of the local community and are thus an integral part of the citizens' daily lives.

"Jigoku Meguri" or The Tour of Hell along a path in the Kannawa area is the highlight of sightseeing in the Beppu Spa. Eight spots including "Umi jigoku" or Ocean Hell Hot Spring made up of bright cobalt blue hot water, "Chi no ike jigoku" or Blood Pond Hell Hot Spring has hot water containing red melted clay gushes out. In "Tatsumaki jigoku" or Tornado Hell Hot Spring, a fifty meters' geyser gushes out every thirty or forty minutes. "Oni Ishi Bōzu Jigoku" or literally Orge Stone Monk Hot Spring is known as an old hot spring described in 737 A.D. in "Bungo Fudoki". "Bungo Fudoki" written about Bungo (present Oita prefecture) from 720-740 A.D., is one of five local culture and geography of provinces. In "Bungo Fudoki," Beppu is frequently described as hot spring areas (Nishibeppu 1-20), so Onsen is shown as meaningful for people in ancient times [18]. Another hot spring, "Yama Jigoku" or Mountain Hot Spring, has animals such as monkeys, hippopotamus, lamas, elephants, flamingoes, etc. kept in the hot spring. "Kamado Jigoku" or Furnace Hot Spring has six different types of hot springs divided into six streets, and is said to be effective to natural skin. "Shiraike Jigoku" or White Pond Hot Spring is known as a famous monk, Ippen Shonin visited in 1276, and has ten kinds of tropical fish including piranhas. "Oni Yama Jigoku" or Ogre Mountain Hot Spring has started to keep alligators and crocodiles since 1922 to utilize hot spring and now there are eighty of them.

It is true what sets Beppu apart from other Onsen resorts is not only its abundance of thermal waters, but also the wide range of bath types that can be enjoyed there. Besides from conventional hot water baths, Beppu offers sand baths, where bathers are buried in naturally heated sand, steam baths that are heated by the steam of a hot spring and mud baths which are basically muddy hot water baths.

In 1950, Beppu has been designated as the first International Tourism Culture City [19], and still there are many tourists visiting Beppu. In 1925, geothermal generation has been developed, and one of hotels produces half of consumed power with geothermal generation. For example, Beppu Suginoi Hotel has its own electric generation plant since 1981. Thus, the method of using geothermal energy has been researched and developed in advance of the present securing of resources. In the 1960s and 1970s, Beppu Onsen has made a rapid development with social stability and economic revival.

However, after 1980s, people tend to choose different types of leisure and different ways of spending their holidays and the change of people's ways of living, and presently, people may not stay for a long period of time because of their individual reasons.

#### VI. CONCLUSION - CHALLENGES OF BEPPU TOURISM AND SHORT-RESIDENTIAL TYPE ONSEN TOUR

In Edo period, people for a long-residential stay were able to stay in Hakone [20]. However, a short-residential stay for customers was not allowed. Because of this, Beppu tourism office makes plans for short-stay programs with local food, natural experience, and ties up with sightseeing programs. Accordingly, the change of Onsen cases in Beppu can be analyzed.

There are several plans tied up Onsen short-stay programs created by Beppu Chikyu Gakko started in 2004 [21].

- 1) Strolling of Beppu Downtown
- 2) Hot Spring Medical Treatment
- 3) Short-stay (one or two days) for Tōji called "Puchi Tōji"
- 4) Visiting Eighty-eight Beppu Hot Springs (from March in 2001)
- 5) Senior Hot Spring Short-stay Tour
- 6) Beppu Study Tour with Onsen Study such as Usuki Buddhist Statues and "Yume no Ōtsurihashi" (suspended big bridge)
- 7) Onsen Medical Tourism (spa stay and medical treatment with relaxation and leisure)
- 8) Onsen with Local Food Experience (Gigoku mushi)
- 9) Eco Tourism such as a) Star Viewing and Barbecue Party, b) Forest and Hot Spring, c) Strolling and Nature Observation, d) Strolling in Rice Terrace and Local Farm Food, e) Strolling and konjac, f) Visiting "Kotee" (Traditional Decorative Coloring on Wooden Building) and Viewing Stones in Beppu, g) Eight Hot Springs in Beppu with Lunch Tour, h) Extracting Fats and Gaining Shiny Skin Tour, and i) Visiting Ryokan and Communication with Okami

In the above description, there are major ten types of programs by the Beppu Tourism Office, they basically place importance on the locality and plan short-stay community-based Onsen experiences with various types of choices so that customers select with their preference.

Offering touristic packages is the new way of strategies related to hot spring. Traditionally, people visited Onsen for cure, but now, people also have their choices of sightseeing, rich food, farming along with hot spring.

Because the change of people's ways of touring Onsen, they try to negotiate short packages with different types of experiences. Though there are many who visit Beppu for Tōji, Beppu tries to attract many people for their strategy for survival of tourism.

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