

# Distribution of Traditional Seafood Dishes and Their Background in Miyazaki Prefecture, South Japan



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**Abstract** In this article we clarify the spread of traditional seafood dishes in Miyazaki Prefecture, South Japan. We then discuss local factors that support these traditional dishes. The results of the research can be summarized as follows: for analysis of data obtained from an interview survey conducted throughout the entire prefecture, nine types of distribution patterns of seafood dishes can be discerned: (A) prefecture-wide consumption, (B) coast-wide consumption, (C) wide consumption in coastal and mountainous areas, (D) wide consumption in mountainous areas, (E) other prefecture-wide consumption, (F) consumption in specific coastal areas, (G) consumption in specific coastal and mountainous areas, (H) consumption in specific mountainous areas, and (I) other specific area consumption. Looking at the background of the distribution patterns, we find that traditional dishes consumed prefecture-wide are dishes familiar in the prefecture in terms of both ingredients and methods of preparation. Many dishes consumed in coastal areas use locally produced ingredients. Dishes consumed in mountainous areas use ingredients that come from over-mountain routes from neighboring prefectures. These distribution routes are connected on a countrywide scale, resulting in dishes like *bodara*, which originated in Hokkaido and were brought to Miyazaki Prefecture.

**Keywords** Traditional seafood dish · Distribution pattern · Miyazaki prefecture

## 1 Introduction

### 1.1 Background and Research Aims

In Japan, seafood has traditionally been eaten in a variety of regions, from coastal areas to inland mountains. Supported by systems of producing and distributing ingredients established through a long passage of time, such seafood dishes have

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shaped diverse local food cultures. However, traditional seafood dishes of different regions are being lost today. Reasons include the abandonment of a fish diet, difficulty in procuring ingredients because of decline in the stock of local specialty fish as a result of depleting resources and changes in fishing methods, and the super-aging of local residents who preserved traditional food cultures.

Research on traditional food cultures has produced many findings. However, when confined to seafood cuisine, there has not been much investigation of local dishes, even in studies of the countrywide diffusion of seafood culture. In my view, in the area of local cuisines there have not been any studies on the spread of diverse traditional seafood dishes in a specific region or on the elucidation of the reasons behind their spread to different areas. Thus, using the region of Miyazaki Prefecture as a case study, we conducted research on the spread of traditional seafood dishes, which overlap in the prefecture in complex ways, and their contemporary use (Nakamura 2008, 2009).

In this article, I introduce the results of the aforementioned research conducted in Miyazaki Prefecture (Fig. 1) and then discuss reasons behind the spread of such seafood dishes.

## ***1.2 Research Methods***

First, we conducted a literature review to identify major traditional seafood dishes developed in Miyazaki Prefecture. In the editorial committee of Miyazaki the complete works of eating habits in Japan (1991), 46 local seafood dishes, drawn from six survey areas within Miyazaki Prefecture during the early Showa era, are introduced along with their ingredients, methods of preparation, and seasons of consumption. Miyazaki Prefecture federation of fisheries cooperative associations (ed) (1994) introduces 73 dishes collected in collaboration with the fishery cooperatives' women's division by the Miyazaki Prefectural Federation of Fisheries Cooperative Association. As there are only a few original creations included in the collection, we selected only traditional dishes confirmed by each fishery cooperative for our research. By referring to these and other sources, we identified 58 dishes as traditional seafood dishes of Miyazaki Prefecture.

Next, to understand where and how these 58 selected dishes were eaten, we conducted interview surveys of households within the prefecture. Specifically, we selected 853 households to interview, or about 2% of all households in the prefecture. The locations of these households were decided on the basis of local maps to avoid any geographic bias. We then conducted onsite interviews. The subjects of the surveys were women 50 years of age or older, whom we assumed had an understanding of traditional cuisines. However, because the sample was randomized, the subjects included men and comparatively young women. The survey asked the subjects to choose the frequency with which they consumed each of the 58 seafood dishes: "often (several times a week)," "sometimes (several times a month)," "seldom (several times a year)," and "never." To analyze the data



**Fig. 1** Study area

obtained, the response “often” was given three points, “sometimes” two points, “seldom” one point, and “never” zero points. The score for each dish in a village or town was calculated by multiplying each survey’s frequency consumption score for a dish by the number of surveys, summing the values, dividing the total by the number of surveys, and then multiplying the result by 100. A choropleth map was then created.

## **2 Regional Diffusion of Traditional Seafood Dishes in Miyazaki Prefecture: Results of Interview Surveys**

In this section, we explain traditional seafood dishes of Miyazaki Prefecture using the classification of nine geographic distribution patterns. A total of 63 seafood species can be counted in the list of ingredients of the 58 traditional seafood dishes

**Fig. 2** Frequency distribution of the consumption of traditional seafood dishes in Miyazaki Prefecture. **a** *Sakana-no-surimi-no-tempura* [minced fish tempura]. **b** Fish sushi, such as *mehikari* [bigeyed greeneye]. **c** *Mezashi-no-tempura* [dried sardine tempura]. **d** *Bodara-no-nitsuke* [dried codfish cooked in soy sauce]. **e** *Kujira-oba-no-su-miso-kake* [whale tail coated with vinegar and miso]. **f** *Magari* [dishes of boiled seaweed]. **g** *Katsuo-no-soboro* [minced bonito]. **h** *Shio-kujira-no-mugi-gayu/mugi-zousui* [wheat porridge of salted whale]. **i** *Ayumeshi* [sweetfish rice]

selected for the study. Of these ingredients, 44 were fresh seawater seafood (69.8% of the total), 15 were salt-cured seafood (23.8%), and four were freshwater seafood (6.3%).

The results of the interview survey revealed that, broadly speaking, dishes ranked 1 (grilled salted *iwashi* [sardine] and grilled salted *saba* [mackerel]) to 17 (miso-grilled *sawara* [Spanish mackerel]) in frequency of consumption were eaten in almost the entire prefecture. Dishes ranked 18 (*katsuo* [bonito] miso) to 32 (*kani-no-tsubushi jiru* [soup of mashed crab]) were eaten in fairly broad areas. Dishes ranked 33 (*magari*) [boiled *Campylaeophora hypnaeoides*, a species of red algae] and lower were limited to particular areas within the prefecture.

Furthermore, we were able to divide the regional pattern of consumption of the traditional seafood dishes in the prefecture into nine types based on the geographic characteristics of each dish.

## 2.1 Type A [Prefecture-Wide Consumption]

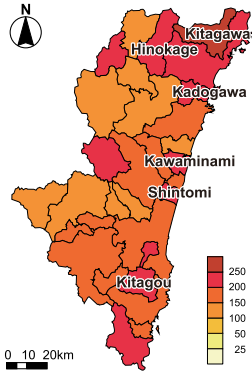
This type includes 17 dishes eaten often throughout the entire prefecture. These dishes all use dried products or seafood popular in the prefecture as ingredients.

Figure 2a shows the frequency distribution of the consumption of *sakana-no-surimi-no-tempura* [minced fish tempura] in Miyazaki Prefecture. It is widely eaten throughout the prefecture, and is noted as a local specialty in areas such as Nichinan (called *obiten*) and northern Miyazaki (*agemi*).

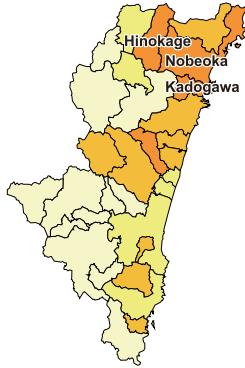
## 2.2 Type B [Coast-Wide Consumption]

Six dishes of this type are consumed widely along the coast. They use fish heavily caught in the prefecture, such as *iwashi*, *aji* [Japanese horse mackerel], *shiira* [common dolphinfish], and *katsuo*.

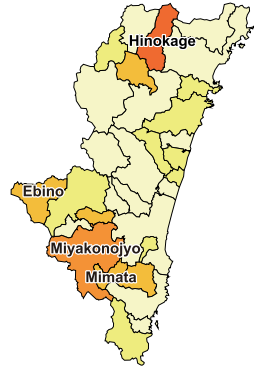
Figure 2b shows the frequency distribution of the consumption of fish sushi, such as *mehikari* [bigeyed greeneye]. Fish sushi is often made from *aji*, *saba*, *iwashi*, and other fish. Originally they were served on special occasions such as festivals. The survey results revealed that they are now eaten daily.



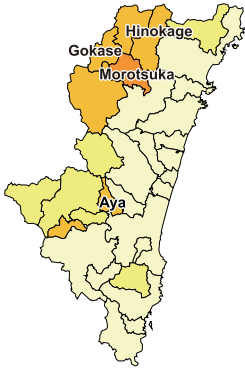
(a) *Sakana-no-surimi-no-tempura*  
[minced fish tempura]



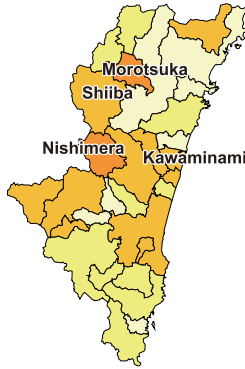
(b) Fish sushi, such as *mehikari*  
[bigeyed greeneye]



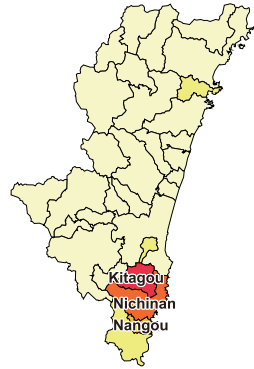
(c) *Mezashi-no-tempura*  
[dried sardine tem-pura]



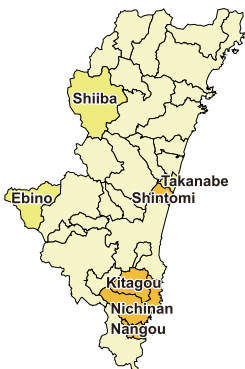
(d) *Sakana-no-surimi-no-tempura*  
[minced fish tempura]



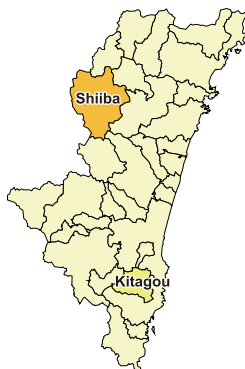
(e) *Kujira-oba-no-su-miso-kake*  
[whale tail coat-ed with vinegar  
and miso]



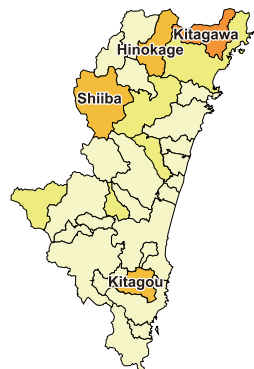
(f) *Magari*  
[dishes of boiled seaweed]



(g) *Katsuo-no-soboro* [minced bonito]



(h) *Shio-kujira-no-mugi-gayu/mugi-zousui*  
[wheat porridge of salted whale]



(i) *Ayumeshi* [sweetfish rice]

### 2.3 *Type C [Wide Consumption in Coastal and Mountainous Areas]*

Four dishes are included in this type. Noticeably, they are consumed in a wide range of areas from the coast to the mountains. Ingredients in this type include dried foods and seasonal foods that are suitable for preservation and transported from different coastal areas.

Figure 2c shows the frequency distribution of the consumption of *mezashi-no-tempura* [dried sardine tempura]. For this example, the distribution can be observed inland from a coastal area in southern Miyazaki to a coastal area and mountainous areas in northern Miyazaki.

### 2.4 *Type D [Wide Consumption in Mountainous Areas]*

This type is noticeably and widely consumed in mountainous areas. The only dish belonging to this type is *bodara-no-nitsuke* [dried codfish cooked in soy sauce]. Its frequency of consumption in these areas is extremely low, with a score of 0.9. The reason is not that this dish is unimportant in this region, or that it is being forgotten. Although it is eaten infrequently, it is a special dish essential to observing the Bon summer-ritual season.

Figure 2d shows the frequency distribution of the consumption of this dish. It reveals that this dish tends to be eaten in areas that are particularly inland.

### 2.5 *Type E [Other Prefecture-Wide Consumption]*

Dishes of this type are widely eaten. No biases could be seen in the regions of consumption. This type includes six dishes with low frequency of consumption. Besides *unagi* [eel] and *kujiraoba* [whale tail], much eaten inland, the dishes use popular ingredients such as *aji* and *ika* [squid]. However, also included are dishes with uncommon methods of preparation.

Figure 2e shows the frequency distribution of consumption of *kujira-oba-no-su-miso-kake* [whale tail coated with vinegar and miso]. Widespread inland consumption could be observed, which extended to the coast. Whale tail is a special New Year's dish, as parents who wish their children to grow "as big as a whale" believe it has auspicious properties.

## 2.6 Type F [Consumption in Specific Coastal Areas]

Sixteen dishes included in this type are typical local dishes that use ingredients produced only in specific regions or use original cooking methods. Examples in the former category include *mukadenori* [food using *Eucheuma serra*, a species of red algae] and *magari*, dishes of boiled seaweed in southern Miyazaki, and dishes using *maguro* [tuna] and *tobiuo* [flying fish], also caught in southern Miyazaki. Dishes in the latter category include *konamasu* [grilled rice balls with *katsuo*], found in Hososhima District of Hyuga City, and *ika-no-kuromiae*, a dish found in Shimanoura District of Nobeoka City. This dish, prepared in the winter, dresses *ika* with miso and squid ink.

Figure 2f presents a map showing the distribution frequency of *magari* consumption, a representative local dish eaten in southern Miyazaki.

Dishes of this type represent the most typical local cuisine. For this reason we further conducted onsite participant observation of *konamasu* and *mukadenori* preparation. We report our findings here.

A cooking demonstration of *konamasu*, a local cuisine of Hososhima, Hyuga City, was provided for us in June 2006 by Sakae Koide, the executive director of the Hyuga City Fisheries Cooperative. The method of preparation involves first separating the head and tail of fresh bonito and carving the body into three pieces. After the outer surfaces of the pieces are grilled, the meat is finely sliced. The head and tail are also grilled, and their meat, including the dark meat, is scraped into a bowl with the previously sliced fish. The meat is seasoned with salt and then added to cooked rice. The mixture is then stirred and kneaded (*konemawasu*—it is said that the name of the dish, *konamasu*, is etymologically derived from this word). The rice and fish mixture is then shaped into *onigiri* [rice balls]. The preparation is completed by grilling the *onigiri* in the oven. Originally this dish was eaten on boats by Hososhima fishermen (Fig. 3). As far as I know, in the numerous harbors where *katsuo* catch is unloaded, there is no other place where a food item like *konamasu* is served. A slightly similar fare is *yaeko*, found in Tosashimizu City, Kochi Prefecture. It is grilled *onigiri* using minced *sodagatsuo* [frigate tuna].

We observed the preparation of *mukadenori*, a local cuisine of southern Miyazaki, in July 2006 at Nakano Shoten (a shop operated by Kazue Nakano), which sells the product in *Ibii*, Nichinan City. Dried *togekirinsai* [a type of seaweed] harvested in advance is soaked in water for about half a day and turned into a paste. Water is added little by little while the seaweed is boiled in a large pot for about 20 min. It is kneaded with a large spatula and any foreign articles are removed. Some salt is sprinkled into a container, into which the paste is poured. A small amount of salt is further sprinkled from above. The mixture is cooled in a refrigerator overnight to set. It is then sliced to the thickness one prefers and then pickled in miso for about two weeks. At present, because *togekirinsai* is not harvested much, the preparation of *mukadenori* has declined (Fig. 4).



Fig. 3 *Konamasu* [grilled onigiri of the rice and minced bonito mixture]



Fig. 4 *Mukadenori* [dishes of boiled seaweed]



## 2.7 Type G [Consumption in Specific Coastal and Mountainous Areas]

Dishes of this type show noticeable consumption in relatively specific mountainous and coastal areas. This type includes *soboro* [minced fish] and dried *fuka* [shark] dishes, which are suited for preservation.

Figure 2g shows the frequency distribution of *katsuo-no-soboro* [minced bonito] consumption. It reveals that the dish is eaten in southern and central Miyazaki, the main regions for catching *katsuo*, and in the mountainous Ebino City and Shiiba Village.

## 2.8 Type H [Consumption in Specific Mountainous Areas]

Dishes of this type are noticeably consumed in relatively limited and specific mountainous regions. In general, because these dishes developed in regions where there were few opportunities to eat seafood dishes, there are only two of them: *enoha (yamame)-no-hodarayaki* [fish stuffed with garlic chives and miso, then wrapped with a bamboo sheath and grilled over indirect heat in a traditional Japanese sunken hearth] and *shio-kujira-no-mugi-gayu/mugi-zousui* [wheat porridge of salted whale]. In Shiiba Village, the salted whale porridge dish is mainly eaten during the rice-planting period in June. It fortifies the body to provide strength for harsh physical labor. It is also consumed because it can be prepared in advance during a time when women's labor devoted to cooking is reduced (Fig. 5).



Fig. 5 *Shio-kujira-no-mugi-gayu* [wheat porridge of salted whale]

Figure 2h shows the distribution map of the frequency of *shio-kujira-no-mugi-gayu/mugi-zousui* consumption. Shiiba Village has the greatest frequency (80.0 points).

## 2.9 Type I [Other Specific Consumption Areas]

Dishes of this type are eaten in relatively limited and specific areas. However, in terms of distribution there is little bias. Three dishes are included in this category. Both saltwater and freshwater seafood are found as ingredients. The former are used in dishes primarily consumed in areas near the sea. The latter are used in dishes consumed primarily in inland areas. However, the frequency of consumption of these dishes is low.

Figure 2i shows the frequency distribution of *ayumeshi* [sweetfish rice] consumption. This map reveals that besides the northern region of Miyazaki Prefecture—mainly in the Gokase River basin famous for its *ayu* dishes—*ayumeshi* is also distributed from inland to coastal areas in central and southern Miyazaki.

## 3 Background of Regional Diffusion of Traditional Seafood Dishes

In this section, we discuss the reasons for the formation of the nine patterns of distribution of traditional seafood dishes in the entire Miyazaki Prefecture and the local background that has sustained these traditional dietary habits.

### 3.1 Type A [Prefecture-Wide Consumption]

Dishes included in Type A do not use special preparation techniques; they are salt-cured foods eaten daily and dishes of popular seafood such as *aji*, *saba*, *iwashi*, *ika*, and *katsuo*. The distribution of salt-cured foods includes those items produced along the coast and transported inland, and items brought into mountainous areas from across prefectural borders. Fresh seafood is caught all along Kyushu's coastline. Like salt-cured foods it is also distributed within Miyazaki Prefecture as well as transported from outside the prefecture. As a result of the distribution of such food items, they are eaten frequently and widely across the prefecture, regardless of whether the area is coastal, inland, or mountainous.

### **3.2 Type B [Coast-Wide Consumption]**

The coastline of Miyazaki Prefecture is of the ria type in the northern and southern region of the prefecture, where it runs unevenly. However, in the rest of the prefecture it is almost entirely linear. The fish stock corresponds to this difference, consisting of warm-water migratory fish in the former areas and shellfish inhabiting rocky and sandy beaches in the latter area. Therefore, dishes using seafood found along the coast are spread throughout the entire coastal region.

### **3.3 Type C [Wide Consumption in Coastal and Mountainous Areas]**

Geographically, Miyazaki Prefecture has a high elevation in the west and a low elevation in the east. As a result, the majority of rivers flow from west to east. Therefore, during the early modern period and the middle Meiji era, when rivers were major transportation routes, goods produced in mountainous regions were transported downriver from river ports and then carried to Osaka, a big port city in western Japan. In contrast, there is almost no evidence of coastal seawater products carried inland to mountainous regions. In other words, seafood caught along the coast and their salt-cured products were not transported inland. Instead, they were distributed locally along the coast, and after the development of rail, transported to urban markets. Consequently, especially in Miyazaki Prefecture's inland regions, there were wide swathes with no consumption of seafood. How then did the dietary habit of consuming salt-cured seawater products develop in inner mountainous regions as it did in coastal areas? In those areas unreachable by boat, goods were transported over land routes. Even in steep mountainous Kyushu terrain, there were trade routes over relatively flat ridges. Salt-cured products were brought in from, for example, Hitooyoshi to Mera and Shiiba over mountains, from Kumamoto to Gokase and Takachiho over Aso, from the Taketa region in Oita Prefecture to Takachiho, and from Kokubu and faraway Izumi in Kagoshima Prefecture to Miyakonojo. These foodstuffs were eaten on special occasions. In this way consumption of seafood brought into mountainous areas from all over Kyushu and along the coast of the Miyazaki Prefecture resulted in the same seafood dishes found along the Kyushu coast.

### **3.4 Type D [Wide Consumption in Mountainous Areas]**

Dishes belonging to this type are distributed from the mountains of Kyushu to the basin of Miyakonojo, located in western Miyazaki. *Bodara* [dried codfish] originated from Hokkaido. Nevertheless, when interviewed, respondents reported that it

was a traditional dish eaten historically during the Bon season. The countrywide distribution routes that brought the dish from Hokkaido to the mountainous interior of Kyushu through a series of wholesalers were formed quite early in Japan's history. Even today stores in mountainous villages such as Takachiho and Shiiba hang *bodara* in the storefront before the Bon season, with signs saying "Bodara available here." When we asked at a store in Takachiho, we were told that the *bodara* arrived from neighboring Oita Prefecture.

### **3.5 Type E [Other Prefecture-Wide Consumption]**

Dishes of this type, while not frequently consumed, show no biases in their distribution. Thus they are similar to Type A. In other words, they use popular ingredients easily procured in their respective local areas within the prefecture. However, because they require special methods of preparation or they are eaten only a few times a year, they are included in this category. The dish *kujira-oba-no-su-miso-kake* [whale tail coated with vinegar and miso] is essential as a New Year's dish for bringing good fortune.

### **3.6 Type F [Consumption in Specific Coastal Areas]**

Dishes belonging to this type rely significantly on ingredients produced only in limited coastal areas in Miyazaki Prefecture, as mentioned above, and to cooking methods suited to the tastes of local residents. Because these dishes were originally passed down and consumed only in limited areas, many of them are highly individualistic and appealing even among the diverse seafood dishes found in Miyazaki Prefecture. However, such traditional seafood dishes, which currently have few proponents, also face a high risk of simply disappearing. Reasons include changes in dietary habits in recent years, the decline of traditional fishing methods, and poor catches due to changes in the sea environment.

### **3.7 Type G [Consumption in Specific Coastal and Mountainous Areas]**

While dishes of this type are similar to Type C, they are more limited in regions of consumption. Consumption in coastal areas uses locally caught seafood. In contrast, the vast majority of ingredients of the dishes in mountainous regions arrive from neighboring prefectures through over-mountain distribution routes.

### 3.8 Type H [*Consumption in Specific Mountainous Areas*]

Some dishes belonging to this type, such as *enoha (yamame)-no-hodarayaki*, use freshwater fish caught locally in mountainous regions as ingredients. On the other hand, whale meat, used in the dish *shio-kujira-no-mugi-gayu/mugi-zousui*, was widely eaten in the past when animal meat was not a primary ingredient. It was brought as a salt-cured product into mountainous regions greatly distant from the sea. In the Kyushu region, the towns of Yobuko in Saga Prefecture, Nagasaki, and Shimonoseki were centers of whale-fishing in the past. Caught whale were distributed from Hitoyoshi to Shiiba. However, in recent years the amount of whale meat transported and consumed has fallen greatly, and whale meat dishes are declining.

### 3.9 Type I [*Other Specific Area Consumption*]

While these dishes are eaten in particular areas, trends in their distribution, such as along the coast or in mountainous regions, could not be discerned. While they use ingredients such as *ayu* and *maguro*, they are special dishes not generally eaten.

## 4 Conclusions

In this article we clarified the spread of traditional seafood dishes in Miyazaki Prefecture while observing their complex spread within the prefecture. We then discussed local factors that supported these traditional dishes. The results of the research can be summarized as follows.

For analysis of data obtained by the interview survey conducted throughout the entire prefecture, nine types of distribution patterns of seafood dishes could be ascertained: (A) prefecture-wide consumption, (B) coast-wide consumption, (C) wide consumption in coastal and mountainous areas, (D) wide consumption in mountainous areas, (E) other prefecture-wide consumption, (F) consumption in specific coastal areas, (G) consumption in specific coastal and mountainous areas, (H) consumption in specific mountainous areas, and (I) other specific area consumption.

Looking at the background of the distribution patterns, we find that traditional dishes consumed prefecture-wide are dishes familiar in the prefecture both in terms of ingredients and methods of preparation. Many dishes eaten in coastal areas use locally produced ingredients. Dishes consumed in mountainous areas use ingredients that come from over-mountain routes from neighboring prefectures. These distribution routes are connected on a countrywide scale, resulting in dishes like *bodara*, which originated in Hokkaido and was brought to Miyazaki Prefecture.

Using Miyazaki Prefecture as a case study to focus on traditional seafood dishes, we find that even on the scale of a single prefecture, traditional culture is naturally formed in connection with other regions. As a future research topic, I wish to study cultural regions from a wider perspective.

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