

# Cherry blossoms and Temperature survey

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# Our Final Team Photo



2021/3/3



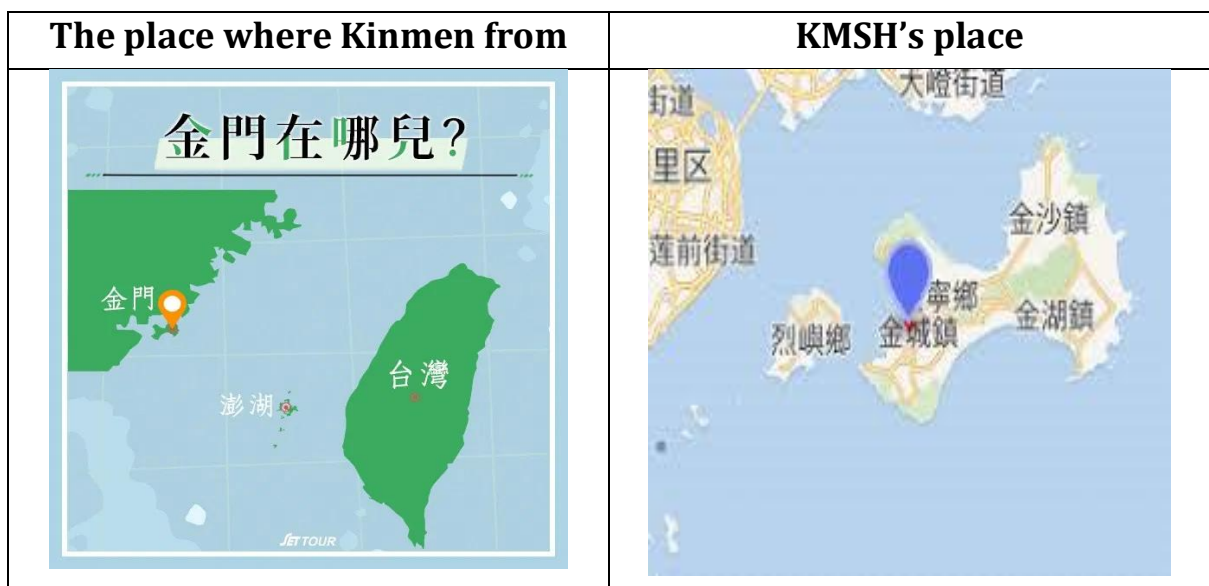
2021/3/7

## ABSTRACT

This study observed the flowering time of this year's cherry blossoms, and used data from previous years to speculate on the flowering time of 2018, 2019 and 2020. It was found that this year's cherry blossoms apparently bloomed earlier than previous years.

## RESEARCH MOTIVATION:

Based on the observation records of the cherry blossoms and the photos of the Jinmen High School students and the cherry blossoms in previous years, then compare the temperature on the corresponding date with the first blooming date, and compare the annual records, hoping to find that the cherry blossoms are more affected by global warming Evidence of early opening.



## LOCATION OF CHERRY BLOSSOMS

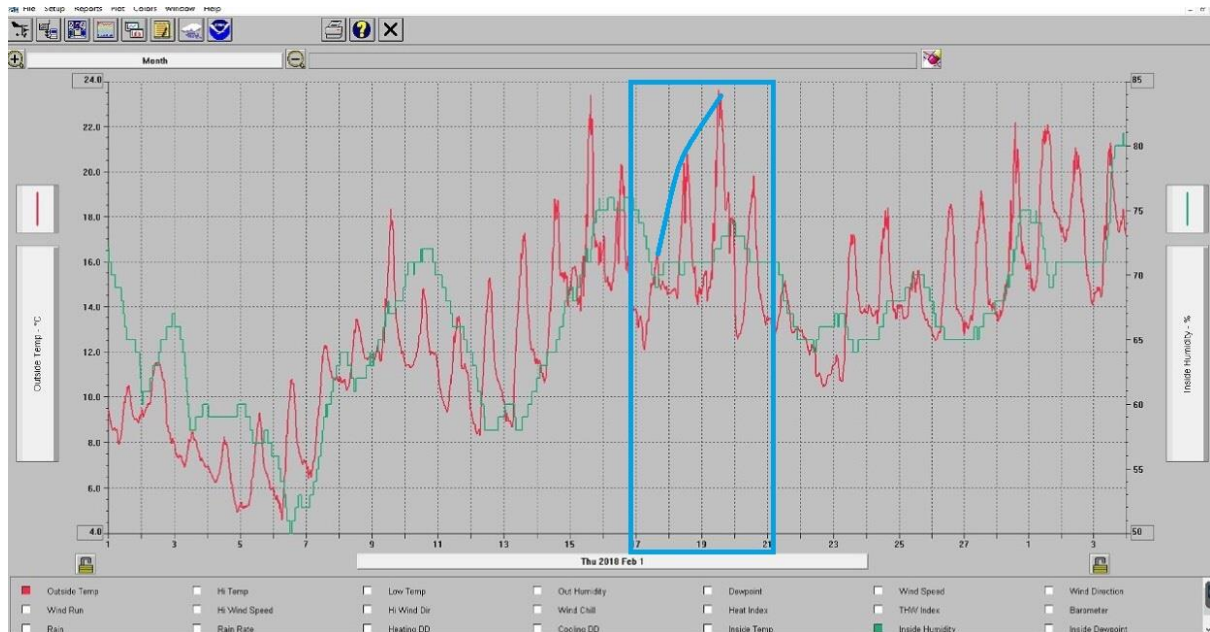


## WAY :

Use the mobile phone to record the cherry blossoms of the day, and add the climate record of the day to make a line chart.

## RESEARCH MOTIVATION :

We found that when the temperature rises, the cherry blossoms will bloom. For example, when the cherry blossoms were in full bloom on February 20, 2018, Temperature record given by the teacher at Kinmen High School.



Temperature starts to warm up in early February

**GREEN** :Room temperature



**RED** :Outdoor temperature

We can find from the outdoor temperature that the cherry blossoms bloom after a low temperature and then warm up.

According to the teacher and reference materials, once the flower buds are exposed to high temperatures, about 15 to 20 degrees Celsius, they will bloom quickly, but they will also quickly wither within four to five days. Conversely, when the temperature rises slowly, the flowers will bloom slowly, and they can last for at least ten days before withering.

Since we observe the cherry blossoms in 2021, we will use the photos taken by the teacher in 2018, 2019, and 2020, as well as the news of the cherry blossoms in the Kinmen area to speculate the time of blooming.

According to February 18, 2019 (Fan Special for Kinmen Tourism)

 <p>樂遊金門 2019年2月18日 · 心</p> <p>台灣各地進入櫻花爆發期！ 其實金門也看得到 🌸香水櫻花&amp;山櫻花的櫻花樹呢🌸 還有跟櫻花一樣粉粉的垂瓣卻李！ 聽起來很生疏的名字，但是很常看得到！ 🌸歡迎跟小編日常櫻景🌸 賞櫻地點:開頂國小、金門縣政府、金門植物園 📷thanks_photos: @蕭振佑 @鍾立偉 #樂遊金門 #金門旅遊 #金門賞櫻</p>	
<p>2019 ImageSource <a href="https://www.facebook.com/kinmentour/posts/1217005155125006/">https://www.facebook.com/kinmentour/posts/1217005155125006/</a></p>	<p>2020National Quemoy University Cherry blossoms in full bloom <a href="https://kinmen.travel/zh-tw/news/details/2520">https://kinmen.travel/zh-tw/news/details/2520</a></p>

According to meteorological data and news, we speculate that the cherry blossoms in 2019 will bloom around February 14, 2019. According to the 2020 3/11 news (Kinmen cherry blossoms in full bloom), it can be speculated that the cherry blossoms in 2020 will bloom at the end of February and early March.

This year we discovered the cherry blossoms. We saw some small petals on February 5th.

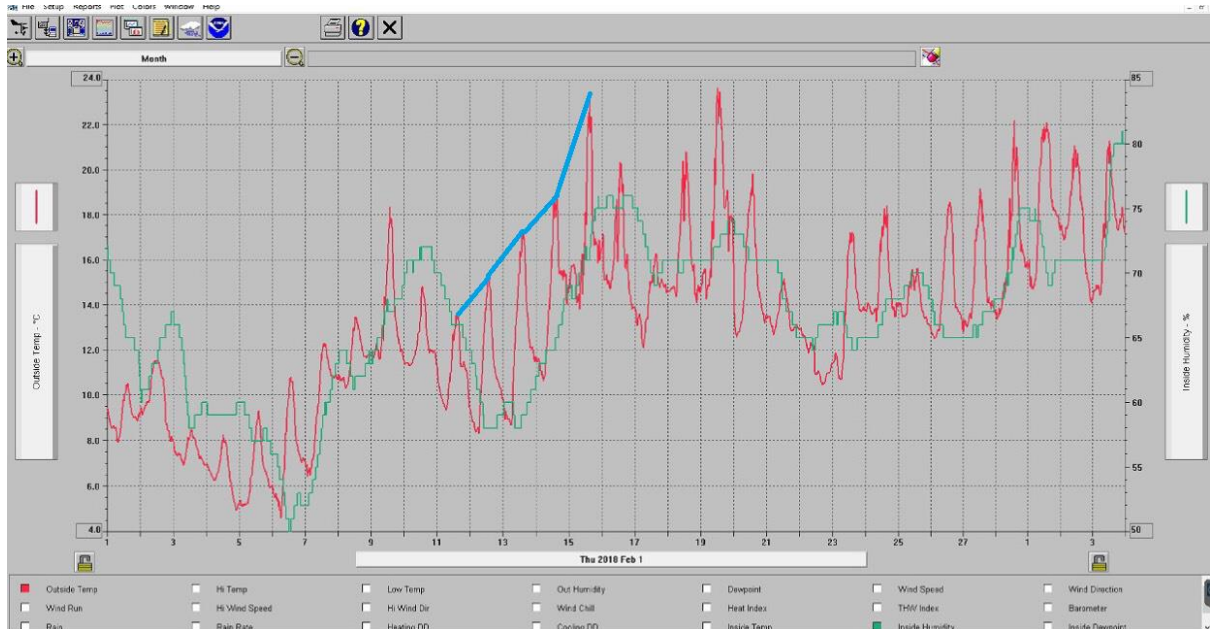
So it is obvious that this year's cherry blossoms bloom earlier than previous years

**THE FOLLOWING IS THE TEMPERATURE DATA AND COMPARISON OF THE PREVIOUS THREE YEARS (2018 2019 2020)**

**P1 :**

2018/2/1~2018/3/4 Temperature graph, First opening: 2018/2/8

Temperature continued to rise in February.

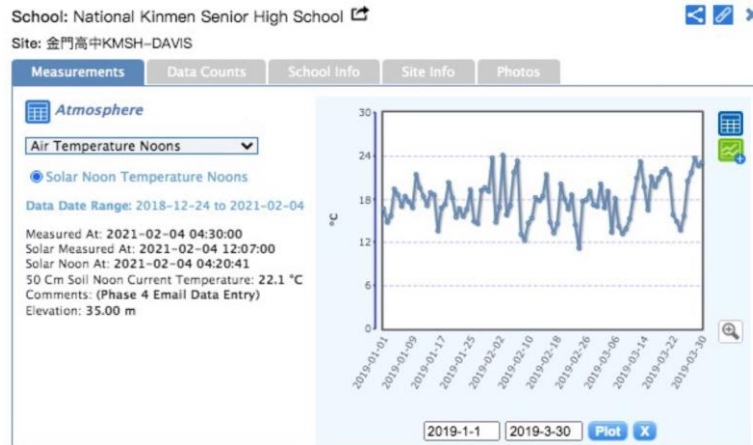


Temperature starts to warm up in early February.

<p>2018/3/2 11:00AM Kinmen senior high school</p>	<p>2018/2/20 Kinmen senior high school a few have bloomed</p>

**P2:**

2019/1/1~2019/3/30 Temperature graph, First opening:2019/2/11



**P3:**

2020/1/1~2020/3/30 Temperature graph, First opening:2020/2/18

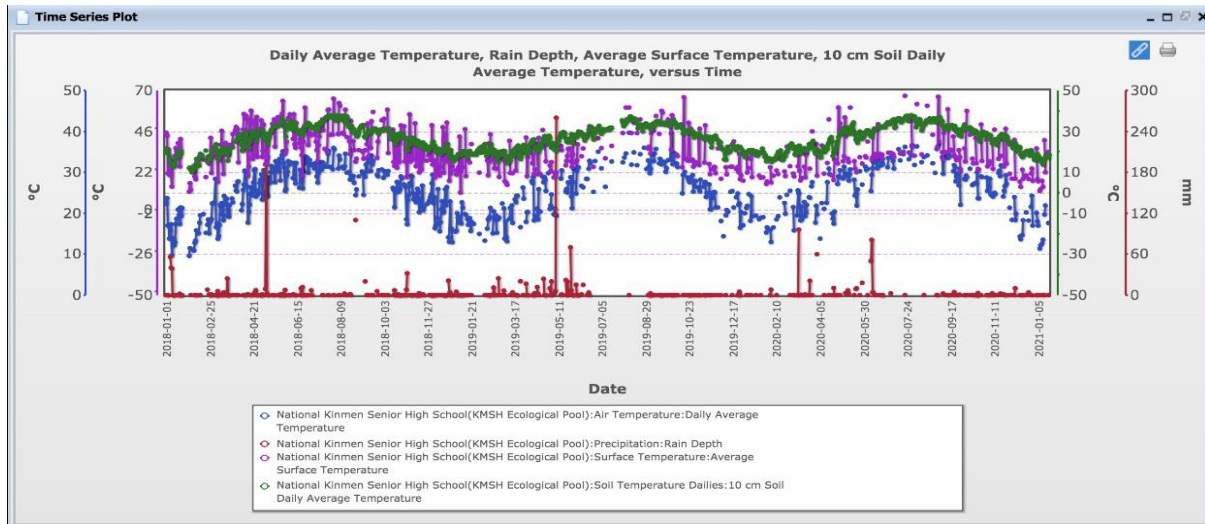


2020/2/27 Kinmen senior high school







2020/2/25 Kinmen senior high school

**P4:2018 2019 2020Year: Change in average daily temperature over time(Blue) 、Rainfall(Red) 、Surface temperature(Purple) 、10 cm average soil temperature(Green)**



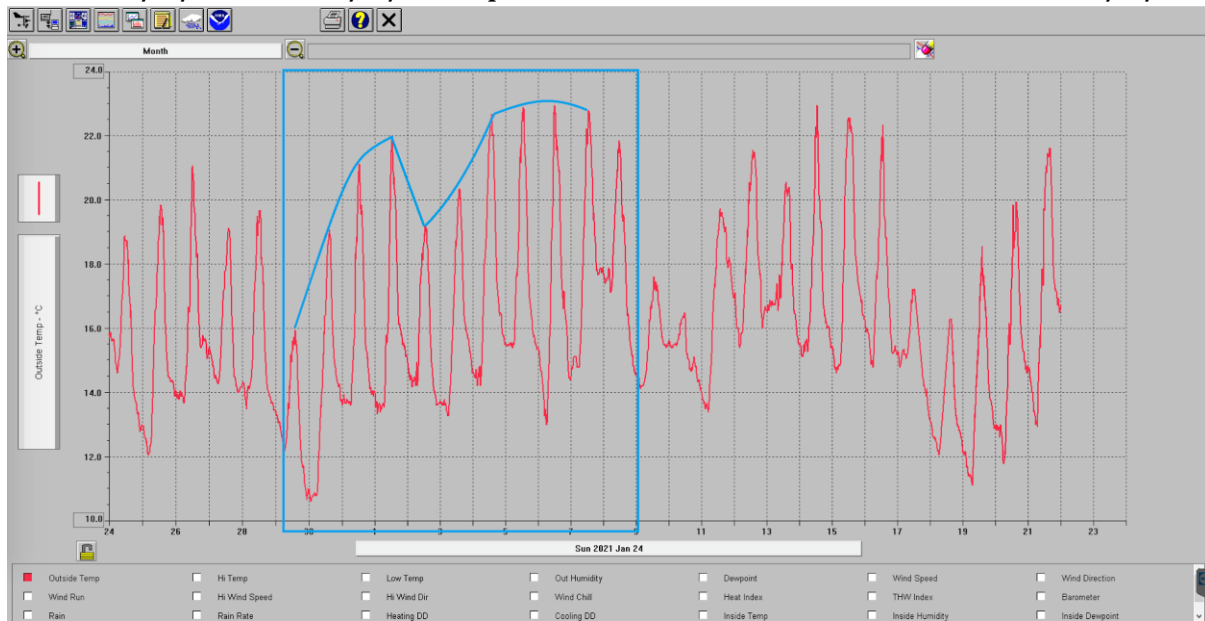
**Kinmen Four distinct seasons**

**Cherry blossoms in other areas of Kinmen in 2021**

	
<p>2021/2/20 10:20AM Xiahouan First opening</p>	<p>2021/2/7 5:10PM Hunan First opening</p>
	
<p>2021/2/7 Taihu</p>	<p>2021/2/21 Yangzhai</p>

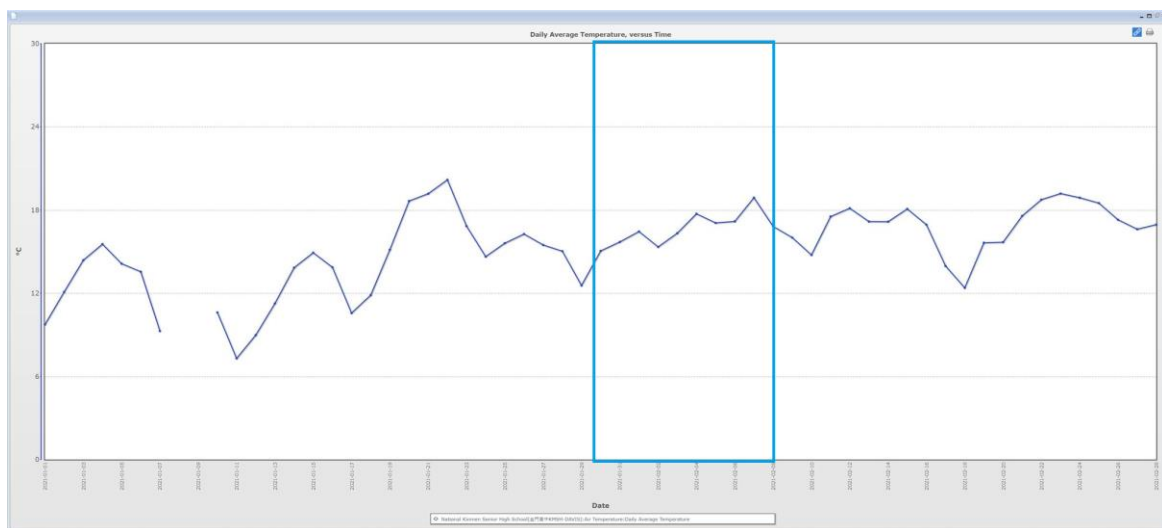


P5:2021/1/24~2021/2/22 Expected to bloom for the first time:2021/2/2



From the above information, we can find one thing in common is that temperatures in winter and summer are distinct. In terms of temperature, Kinmen is the same as Japan's suitable for planting cherry blossoms. The low temperature in winter also coincides with the conditions for cherry blossoms in full bloom.

We found that the date of the first flowering in 2021 is significantly earlier than in previous years



It started to warm up in January this year.

## Records and photos:



2021/2/8 Kinmen senior high school



2021/2/15 Kinmen high school 2:00PM  
First opening on the left The flower on the right is open.



2021/2/21 Kinmen senior high school



2021/2/22 Kinmen senior high school



2021/2/23 Kinmen senior high school



2021/2/25 Kinmen senior high school

## DISCUSS:

1. The cherry blossoms of 2018 have bloomed in mid-February
2. The cherry blossoms of 2019 have bloomed at the end of February
3. The 2020 cherry blossoms have already bloomed in early March
4. The 2021 cherry blossoms have already bloomed in early February
5. Kinmen's temperature environment is similar to Japan
6. There is a chance to bloom when the temperature difference changes from cold to warm, but the time when the temperature warms up every year is not fixed, so it still needs to be determined by the conditions of the year
7. Refers to the sum of the daily average temperature over a period of time. From growth to maturity, each plant has a minimum limit of accumulated climate heat. This minimum accumulated climate heat limit is called accumulated temperature.

## CHERRY TREE OF MAP



## **CONCLUSION:**

- 1.The temperature rise is the time for the cherry blossoms to bloom. Kinmen is generally in February
- 2.Kinmen has four distinct seasons. Compared with other areas of the same latitude, it is suitable for planting cherry blossoms.
- 3.The blooming time of each cherry tree is different. It is possible that the first one has withered before the new one blooms.
- 4.From the information we found on the Internet, we can find that there is a certain formula for cherry blossoms to bloom. The cherry blossoms in our school belong to Yoshino cherry blossoms. After its Cumulative Temperature reaches 290 degrees, it begins to bloom.

## **REFERENCE MATERIAL:**

1. Global Warming Japan Cherry Blossoms bloom early Experts worry that they will not see the flower in the future -CommonWealthMagazine  
( <https://www.ftvnews.com.tw/news/detail/2018327I01M1> )
- 2.When does the Cheery Blossoms bloom ? Warm in Winter and Cold in Spring ! - CommonWealthMagazine  
(<https://www.cw.com.tw/article/5094710>)
- 3.Global Warming 、 Heat island effect Japan cherry blossom festival held early-TVBS NEWS  
(<https://news.tvbs.com.tw/world/1103897>)
- 4.Cumulative Temperature of source information  
(<https://pedia.cloud.edu.tw/Entry/Detail/?title=%E7%A9%8D%E6%BA%AB> )
- 5.Japan's Earliest ! Okinawa Cherry Blossoms bloom 15 days earlier than last year-United NEWS  
(<https://udn.com/news/story/9659/3581692>)