

日治時期十大寒害個案的時空特徵

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摘要

本研究十大寒害個案根據日治時期史料資料文獻數量的排序，及中央氣象署「低溫」定義，為該年 11 月至隔年 4 月平地最低氣溫低於 10°C 以下之跨年現象，平地則是指海拔高度 200 公尺以下，以氣象觀測資料分析個案相關的時空特徵。

十大寒害起迄時間涵蓋日數顯示，有七件個案在 100 日以上，其中 1924/25 個案 147 日最多，1918/19 個案 94 日最少。個案研究期間 10°C 以下低溫寒流發生頻率，以 1917/18 個案最多，七個測站平均 9.3 次，臺中 13 次、臺北、臺南與彭佳嶼都是 9-11 次。此個案也有單波 10°C 以下低溫寒流的最長持續日數，臺中 19 日及臺北 18 日。6°C 以下低溫寒流發生頻率，亦是 1917/18 個案最多，七個測站平均有 4.14 波的寒流來襲，臺中最高 10 次，臺北和臺南 7 次。此個案單波 6°C 以下低溫寒流的最長持續日數，臺北 6 日及臺中 3 日。測站 10°C 以下低溫日數最大值發生於 1917/18 個案，臺中 66 日、臺北 53 日、彭佳嶼 45 日及臺南 42 日；6°C 以下低溫日數最大值也是發生於 1917/18 個案，臺北 20 日、臺中 19 日、臺南 11 日、彭佳嶼 6 日。研究個案的全臺最低溫常發生於臺北或臺中，十大個案中臺中 7 次，臺北 3 次，測得的極端最低溫臺中較冷-1°C，出現在 1901 年 2 月 13 日，臺北 1.1°C 則發生於 1922 年 11 月 27 日。

關鍵字：寒害，歷史文獻，低溫，發生頻率，持續時間

The spatiotemporal characteristics of ten major cold events during the Japanese colonial period

ABSTRACT

Based on the numbers of historical documents during the Japanese colonial period and "low temperature" definition of the Central Weather Administration, this study is aimed to analyze the spatiotemporal characteristics of ten major cold events as a phenomenon where the minimum temperature in lowland areas drops below 10°C and lowland areas are defined as those with an elevation below 200 meters.

The duration of the ten events ranged widely, with seven events lasting over 100 days. The 1924/25 event had the longest duration at 147 days, while the 1918/19 event was the shortest at 94 days. During the study period, the frequency of cold waves with temperatures below 10°C was highest in the 1917/18 event, with an average of 9.3 occurrences across seven stations, 13 occurrences in Taichung, 9-11 occurrences among Taipei, Tainan, and Pengjia Islet. This event also had the longest days for a single cold wave with temperatures below 10°C, lasting 19 days in Taichung and 18 days in Taipei.

The maximum number of days with temperatures below 10°C occurred during the 1917/18 event, with Taichung experiencing 66 days, Taipei 53 days, Pengjia Islet 45 days, and Tainan 42 days. The lowest temperatures across Taiwan during the study period were often recorded in either Taipei or Taichung. Among the ten major events, Taichung recorded the lowest temperature seven times, while Taipei did so three times.

Keyword: cold disaster, historical document, low temperature, occurrence frequency, time duration