

Revisiting the daily weather information in *Guan Tingfen Diary* (Haining, China, 1815-1865)

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Supplementary Figures

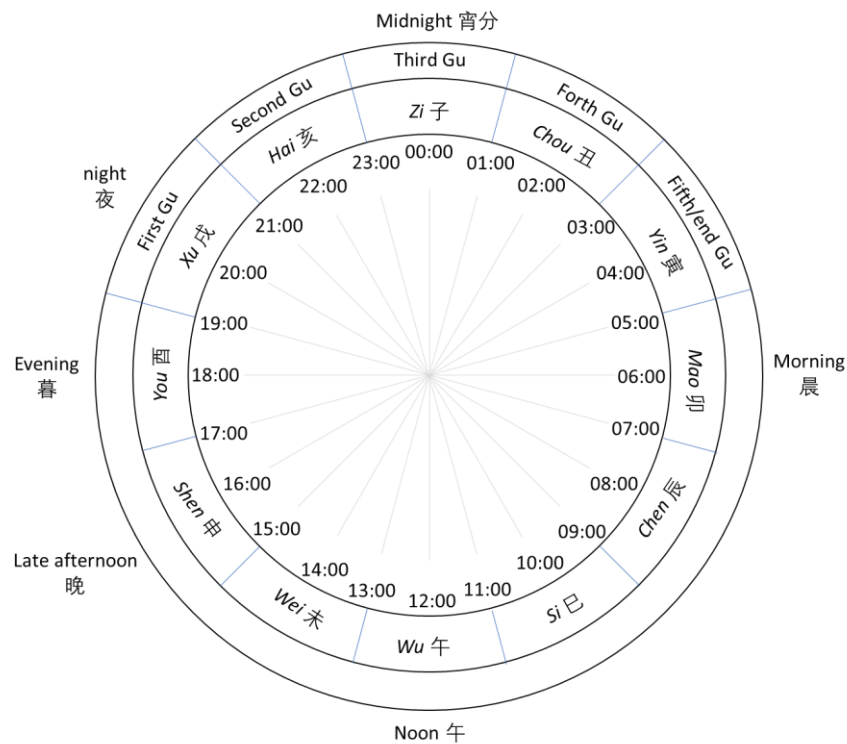


Fig. S 1 Schematic diagram of the time-description system used in the weather diary. The inner circle represents modern clock time, followed by the traditional Chinese twelve double-hour system, the five-watch night system, and colloquial time expressions in the outermost ring.

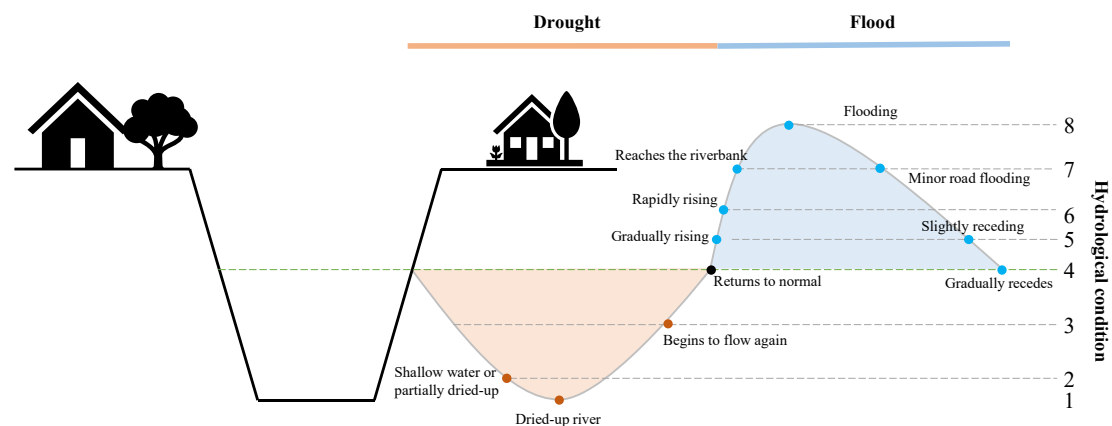


Fig. S 2 Schematic illustration of the categorization of hydrological conditions.

Supplementary Tables

Tab. S 1 Categorization of sky conditions from cloudy to sunny

Cloudy/Sunny	Descriptions
1 – Cloudy	cloudy/overcast (阴); no sign of clearing (天无晴意); overcast and rainy (阴雨); rain/snow throughout the day (雨/雪竟日)
2	relatively overcast (薄阴/微阴); briefly clear, then becoming cloudy (晴, 即阴); signs of clearing (天有晴意); a brief glimpse of sunshine (微露日光); not clearing until dusk (薄暮转晴)
3	cloudy/rainy in the morning and clear in the late afternoon (晨阴/雨, 晚晴/开朗/霁); clear for one or two <i>shichen</i> (一两个时辰晴)
4	alternating cloudy/rainy and clear conditions (阴/雨晴不定); cloudy/rainy in the morning and clear by noon (晨阴/雨, 午晴/开朗/霁); gradually clearing (阴, 渐晴)
5	clear in the morning and cloudy/rainy in the late afternoon (晨晴, 晚阴/雨); cloudy for one or two <i>shichen</i> (一两个时辰阴)
6	relatively clear (薄晴); briefly cloudy, then becoming clear (阴, 即晴); slightly cloudy in the late afternoon (晚, 微云); dense clouds toward dusk (薄暮密云)
7 – Sunny	clear (晴); clear throughout the day (嫩晴竟日)

Tab. S 2 Categorization of snowfall

Snow	Descriptions
1 – Light snow	light snow (微雪); brief snowfall (飞雪略止); mixed rain and snow (雨雪交作)
2 – Snow	snow without further description (雪、飞雪)
3 – Heavy snow	heavy snow (大雪、雪甚大); heavy snow with very large snowflakes (大雪如絮/掌); persistent snowfall (雪绵绵未止); snowfall throughout the day (雪竟日)

Tab. S 3 Categorization of wind direction and intensity

Wind		Descriptions
Direction		N, NE, E, SE, S, SW, W, NW
Intensity	1 – Light	light wind (微风); wind (有风)
	2 – Moderate	gradually strengthening (渐急、渐大); weakening compared with the previous day (稍缓); cold, harsh wind and rain (凄风苦雨)
	3 – Strong	strong wind (大风、北风大作、西北风仍急、疾风); sudden strong wind (北风陡发); violent wind (猛烈)
	4 – Very strong	roaring/howling wind (作吼、怒号); extremely strong wind (极大、甚急); wind strong enough to uproot trees (大风拔木)

Tab. S 4 Categorization of perception on cold/warm

Perception	Descriptions
1 – Very cold	extremely/severely cold (奇寒、甚寒、严寒、颇寒、寒冽、沍寒、呵冻、气甚凜冽、天寒地冻); cold enough to freeze dripping water (滴水成冰); penetrating cold (寒气侵入)
2 – Cold	cold (寒); suddenly/gradually becoming cold (陡寒、渐寒、气渐凜冽); slightly cold (薄寒); persistent bitterly cold wind (寒风仍冽)
3 – Cool	cool (凉); gradually/suddenly becoming cool (渐凉、陡凉); very cool (凉甚)
4 – Warm	warm (暖); gradually becoming warm (渐暖); mild and pleasant warmth (和煦、和暖); very warm (暖甚)
5 – Hot	hot (热、燠); gradually/suddenly becoming hot (渐燠、陡燠); overcast and hot (阴燠)
6 – Very hot	exceptionally hot (天色之燠，无逾于此); extremely hot (酷热、苦热、热甚、甚燠、暑气酷烈); intolerably hot (热不可耐); hot and humid (闷燠、湿燠、蒸湿); steamy weather (炎蒸、蒸燠)

Tab. S 5 Categorization and coding of other phenomena

Other phenomena	Codes
Precipitation-related phenomena	1A – Fog; 1B – Frost; 1C – Hail; 1D – Graupel; 1E – Glaze ice/Rime; 1F – Summer snowfall
Freezing-related phenomena	2A – General freezing; 2B – Ground or object freezing; 2C – River or lake freezing; 2D – Coastal ice
Optical phenomena	3A – Solar eclipse; 3B – Lunar eclipse; 3C – Red moon; 3D – Rainbow; 3E – Unusual solar coloration
Others	4A – Dust; 4B – Thunder; 4C – Fire