

## OCTOBER STATISTICS RECORDED AT LERWICK OBSERVATORY

	October 2008	Averages 1971-2000
Mean maximum temperature	9.7°C	10.1°C
Mean minimum temperature	5.9°C	6.2°C
Daily mean temperature	7.6°C	8.1°C
Mean sea-level pressure	1000.1 hPa (mb)	1008.0 hPa (mb)
Total rainfall	179.8 mm	131.9 mm
Wet days => 1 mm	26 days	19.4 days
Sunshine (electronic sensor)	69.3 hours	65.4 hours
Air frosts	1 day	0.5 days
Ground frosts	6 days	5.2 days
Snow/sleet	4 days	2.0 days
Days with gale	6 days	4.0 days
Maximum daily mean temp.	12.0°C on 10 <sup>th</sup>	
Minimum daily mean temp.	0.5°C on 28 <sup>th</sup>	
Highest maximum	14.7°C on 10 <sup>th</sup>	
Lowest day maximum	3.0°C on 28 <sup>th</sup>	
Highest night minimum	10.6°C on 10 <sup>th</sup>	
Lowest minimum	-3.0°C on 28 <sup>th</sup>	
Lowest grass minimum	-4.9°C on 28 <sup>th</sup>	
Wettest day	30.2 mm on 7 <sup>th</sup>	
Sunniest day	6.1 hours on 14 <sup>th</sup>	

### **CHANGEABLE - A MONTH OF CONTRASTS**

**With low pressure usually not far from - and often to the north of - Shetland, a mainly W'ly cyclonic airflow gave a very changeable, unsettled and cool month. Like the rest of Scotland, while Shetland experienced rainfall significantly above average, it was at the same time reasonably sunny. Helped no doubt by the two outbreaks of - for October - unusually cold Arctic air, the month was also the coolest since 2003. While the first snowfall on the 4th was possibly one of the earliest recorded (certainly since the snow-cover of 13th October 1957), it was local to Shetland. The second, on the 28th, saw substantial snowfall, possibly the heaviest and most widespread such event in lowland Britain since 1880, with some places seeing their coldest October day for 50 years.**

With a depression off southwest Norway, the 1st was a bright day with scattered showers and a cool NW'ly wind. As the low moved east into Scandinavia during the 2nd and cold N'ly winds strengthened to gale-force, showers became more frequent. As pressure built to the west of Scotland on the 3rd, air of Arctic origin flowed south and the showers turned wintry. However, gales did ease - at least for a time - as a ridge sank south over the British Isles.

A complex - though shallow - area of low pressure then developed across the northeast Atlantic and southern Norwegian Sea. The 4th was a cold, wet and windy day. A marked cold front - the boundary between the unseasonably cold air to the north and milder air to the south - moved down across Shetland during the morning. Though areas to the south of it had mainly rain or sleet, parts of West and North Mainland - just in the colder air - saw the rain turn readily to snow, giving some areas an unusually early October snow-cover. By evening, W to NW'ly gales were again developing across the Isles. Milder conditions followed, gales eased and showers died out on the 5th as a deep low, tracking east to the north of Shetland, moved away north along the Norwegian coast.

SE'ly winds freshened on the 6th, ahead of fronts which brought outbreaks of mainly light, showery rain later in the day. However, with low pressure over Iceland, a moist and mild SE'ly airflow produced very heavy rain accompanied by thunder and misty conditions on the 7th. The thundery trough cleared north overnight, to leave the Northern Isles with a much brighter, drier day and fresh W'ly winds on the 8th. As low pressure moved east into Scandinavia, a weak ridge followed from the west overnight.

The 9th started dry and bright as the ridge declined, but turned wet with strengthening S'ly winds as a very deep Atlantic depression drove an occluded front east over the Northern Isles. As the filling low tracking slowly away over Iceland, the 10th and 11th were drier, brighter days with outbreaks of mostly light, showery rain and

very mild, strong to gale-force SW to W'ly winds. There were further outbreaks of rain on the 12th, as the next Atlantic depression pushed a front east. This cleared Shetland early on the 13th, with strong SW to W'ly winds bringing frequent showers. A ridge of high pressure, moving in from the west, killed off the showers and brought lighter winds to leave a mostly dry, sunny day on the 14th.

A cold front - associated with a depression moving east to the south of Iceland - crossed Shetland on the 15th bringing some rain, with cooler and showery conditions following from the northwest. The fresh to strong SW to W'ly winds - gusting to over 50 mph - veered to a showery W to NW'ly direction on the 16th, as the deep depression moved east to the north of Shetland. Winds eased overnight as a ridge crossed from the west, then strengthened SW'ly on the 17th as a depression - tracking northeast over Iceland - pushed a warm front across northern Scotland, bringing a little rain. A more active cold front followed overnight, leaving the area in a strong and showery W'ly airflow. This eased and backed SW'ly later on the 18th, bringing a mostly dry night as the filling low moved away and a weak ridge followed from the west.

The next deep depression pushed more rain-bearing fronts east on the 19th, with SW'ly gales developing as it moved towards Faeroe. The 20th and 21st were cold days with frequent showers, the heavier ones wintry with sleet and hail. Strong to gale-force winds - gusting to over 60 mph - veered W'ly as the filling low moved away over the Norwegian Sea. The 22nd was a drier, milder day, with strong winds backing SW'ly later as more fronts moved in off the Atlantic. There were outbreaks of rain on the 23rd, with strong to gale S to SW'ly winds gusting to 81 mph on Fair Isle, as fronts moved slowly east over the Northern Isles. With a deep depression slow-moving just northeast of Iceland, the 24th was quite a cool day with heavy, wintry showers, as the strong to gale-force SW'ly winds - despite their direction - had an Arctic origin. Some of the showers were also accompanied by thunder.

A front, pushed northeast by a deep and vigorous low running quickly north past northwest Scotland, brought heavy rain and severe gale-force S'ly winds north across Shetland early on the 25th. During the afternoon, as the front passed, winds increased storm F10 to violent storm F11 and - for a short while - hurricane F12, with a ten-minute mean wind speed of 74 mph. There were gusts up to 93 mph at Lerwick and 89 mph on Fair Isle, This is probably a new October wind-speed record for Shetland. Later in the day, the rain cleared to blustery, heavy and occasionally thundery showers as gales veered SW'ly. The showers turned wintry on the 26<sup>th</sup>, as the low moved away into the Norwegian Sea and winds veered W'ly. The 27<sup>th</sup> was another cold day, with showers turning progressively more wintry as strong to gale-force winds veered NW'ly.

With pressure high in mid-Atlantic and low over the Norwegian Sea, strong and Arctic NW'ly winds - accompanied by temperatures of around -2° Celsius - brought a bitterly cold start to the 28th. A small but significant low moved south just to the east of Shetland, bringing another period of unseasonably early snow, accompanied by strong winds. Gusts of over 60 mph occurred in places across Shetland. One is left wondering (had this happened a few months further into winter, when sea temperatures would be some 4° Celsius lower than the current 11° Celsius) just how much snow would have occurred! In the event heavy snow - as in the earlier fall - soon turned to rain, but not before some places had seen yet another October snow-cover of several centimetres. With the temperature ranging from a low of -3° to a high of only +3° Celsius, this was probably the coldest October day since 1964, when the temperature fell to -3.3° Celsius.

With a filling low off southwest Norway, fresh N to NE'ly winds brought scattered showers - a few wintry - to Shetland on the 29<sup>th</sup>. The cold winds persisted through the 30th, although the showers gradually died out as an anticyclone, developing south of Iceland, extended a ridge of high pressure northeast across Faeroe into the Norwegian Sea.

The 31<sup>st</sup> was a bright, mostly dry and cool day, with the N to NE'ly winds easing as the ridge toppled southeast across Shetland into northern Scotland.

## **Dave Wheeler**

### **Initial Statistical details for Scotland as a whole (1961-1990 average) for October)**

**Mean Temperature** – 7.3°C (0.8°C below average). Coldest October since 2003.

**Rainfall** – 242.2 mm (152% of average). 4th wettest October since 1954.

**Sunshine** – 86.5 hours (117% of average).

## **Data from the UK Met Office**