

in the temperature of the sea-surface off the Norwegian lighthouses for the month of February, while the upper curve shows the variations of the date at which the coltsfoot (*Tussilago farfara*) began to blossom in central Sweden (Upsala). This plant begins to blossom, on the average, about the 9th April, the exact date varying in different years from the 18th March to the 28th April. The two curves agree in many points; when the water off the lighthouses was relatively warm in February the flowering commenced early, and when it was cold the blossoming was late.

Pettersson had at his disposal only observations from the water in the immediate vicinity of these coast stations, but since

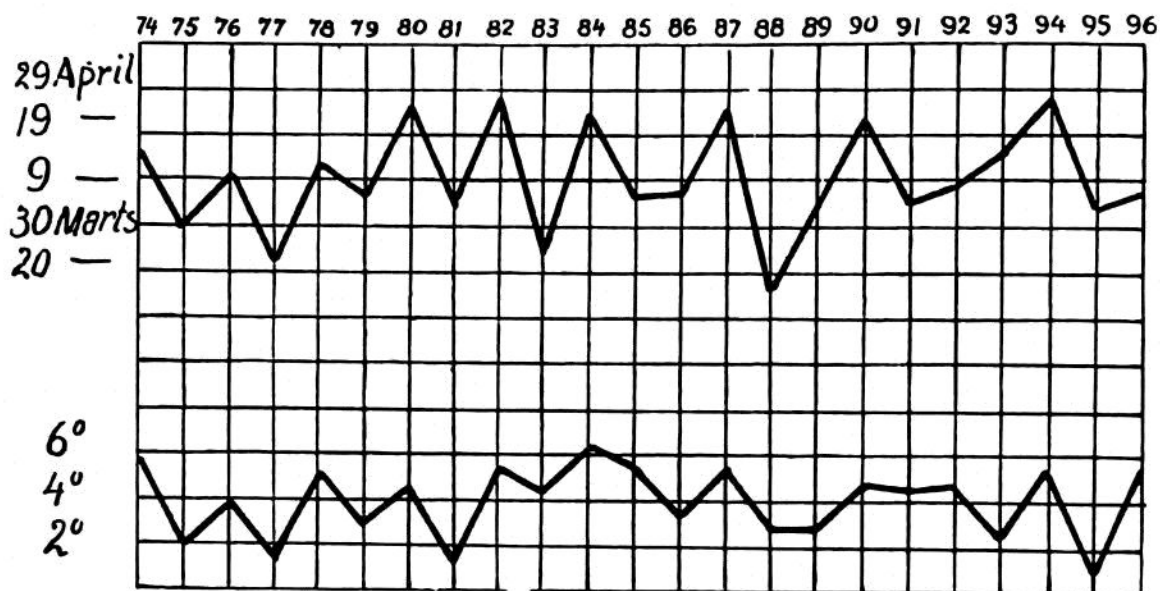


FIG. 207.

The upper curve shows the time of blossoming of *Tussilago farfara* at Upsala during a series of years. The lower curve shows the surface-temperature of the sea off the west coast of Norway, in the month of February of the same years.

regular investigations were started in the Norwegian Sea in 1900, we have excellent series of observations during a succession of years, not only in the coast-water, but also in that branch of the Gulf Stream which flows into the Norwegian Sea. Nansen and the writer have found, by going through all the observations made in the years 1900 to 1905, that there are great variations in the temperature-conditions of this Atlantic current, and that these variations are apparently followed by corresponding variations in many other conditions; for example, the temperature of the air, the year's harvest, the growth of the trees, and various circumstances touching the appearance of great shoals of fish. One or two instances may be referred to here.

During the Norwegian investigations a section was run