

A Science Service Feature

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? WHY THE WEATHER ? Mailed January 26, 1929

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CRUDE WEATHER INSTRUMENTS

A century ago weather observers were rare and good weather instruments were even rarer. In London, long before the official Meteorological Office was established, the principal weather record for the world's greatest city was the "Meteorological Journal Kept at the Apartments of the Royal Society", which is appended to many of the early volumes of the Society's "Philosophical Transactions". The primitive methods of keeping this journal are described in the first edition of J. F. Daniell's "Meteorological Essays", published in 1823.

The barometer of the Society was crude in the extreme. It had been filled without boiling the mercury to remove the air and moisture. No corrections were applied to its readings for temperature or for variations in the level of the mercury in the cistern. The thermometers came from an ordinary instrument-maker's shop and their graduations had never been verified. The Society possessed no vane of its own but depended on one of the ordinary non-scientific kind on a neighboring building.

The elevation of the rain-gauge is stated with ostentatious precision in the published journal, which, however, fails to mention that the funnel was placed immediately under the cowl of a chimney, and that it was one of the duties of the Society's clerk "ever and anon" to pass a wire up and down the pipe to clear it from accumulated soot. "No wonder," remarks Professor Daniell, "that the quantity of precipitation should vary with the wind, or that the amount of rain should be greater in summer than in winter! To object to any of the particulars of the construction of the instrument after this, or to complain that the water is left to collect for weeks and months before it is measured, would be comparatively insignificant criticism."

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