

I The aurora as known to the ancients

In Seneca's 'Quæstiones Naturales', Lib. I. c. xiv., we find the following: — "Tempus est, alios quoque ignesI percurrere, quorum diversæ figuræ sunt. Aliquando emicat stella, aliquando ardores sunt, aliquando fixi et hærentes, nonnunquam volubiles. Horum plura genera conspiciantur.

I Seneca's
'Quæstiones
Naturales',
Lib. I. c. xiv.

Sunt *Bothynoë*^I βόθυνος, a hollow. Seneca's 'Quæstiones Naturales', Lib. I. c. xiv. Description

of Auroræ, quum velut corona cingente introrsus igneus cœli recessus est similis effossæ in orbem speluncæ.

Sunt *Pithitæ*^{II} πίθος, a cask, quum magnitudo vasti rotundique ignis dolio similis, vel fertur vel in uno loco flagrat. Sunt *Chasmata*^{III} χάσμος, a chasm, quum aliquod cœli spatium desedit, et flammam dehiscens, velut in abdito, ostentat. Colores quoque omnium horum plurimi sunt. Quidam ruboris acerrimi, quidam evanidæ ac levis flammæ, quidam candidæ lucis, quidam micantes, quidam æqualiter et sine eruptionibus aut radiis fulvi.

C. xv.² “Inter hæc ponas licet et quod frequenter in historiis legimus, cœlum ardere visum: cujus nonnunquam tam sublimis ardor est ut inter

2 Seneca, c.
xv.

ipsa sidera videatur, nonnunquam tam humilis ut speciem longinqui incendii præbeat.



Fig. 1: Rosendaal

“Sub Tiberio Cæsare cohortes in auxilium Ostiensis coloniæ cucurrerunt, tanquam conflagrantis, quum cœli ardor fuisset per magnam partem noctis, parum lucidus crassi fumidique ignis.”

We may translate this:³ — “It is time other fires also to describe, of which there are diverse forms. “Sometimes a star shines forth; at times there are fire-glows, sometimes fixed and persistent, sometimes flitting. Of these many sorts may be distinguished.

³ Seneca, c. xv.



Fig. 2: Trajectum ad Rhenum

There are Bothynoë, when, as within a surrounding corona, the fiery recess of

the sky is like to a cave dug out of space. There are Pithitæ, when the expanse of a vast and rounded fire similar to a tub (dolium) is either carried about or glows in one spot.

“There are Chasmata, when a certain portion of the sky opens, and gaping displays the flame as in a porch. The colours also of all these are many. Certain are of the brightest red, some of a flitting and light flame-colour, some of a white light, others shining, some steadily and yellow without eruptions or rays.





II The colony of Ostia

“Amongst these we may notice, what we frequently read of in history, the sky is seen to burn, the glow of which is occasionally so high that it may be seen amongst the stars themselves, sometimes so near the Earth (*humilis*) that it assumes the form of a distant fire.

Under Tiberius Cæsar the cohorts ran together in aid of the colony of Ostia as if it were in flames, when the glowing of the sky lasted through a great part of the

night, shining dimly like a vast and smoking fire.”

From the above passages many striking particulars of the Aurora may be gathered; and by the division of the forms of Aurora into classes it is evident they were, at that period, the subject of frequent observation. The expression⁴ “et quod frequenter in historiis legimus” shows, too, that the phenomena of Auroral displays were a matter of record and discussion with the writers of the day.

4 Aurora frequently read of in history.

Various forms of Aurora may be recognized in the passages from Chap. xiv.; while in those from Chap. xv. a careful distinction is drawn between the Auroræ seen in the zenith or the upper regions of

the sky, and those seen on the horizon or apparently (and no doubt in some cases actually) near the Earth's surface.

The description of the cohorts running to the fire only to find it an Aurora, calls to mind the many similar events happening in our own days. Not, however, but that a mistake may sometimes occur in an opposite direction.⁵ “In the memoirs of Baron Stockmar an amusing anecdote is related of one Herr von Radowitz, who was given to making the most of easily picked up information. A friend of the Baron's went to an evening party near Frankfort, where he expected to meet Herr von Radowitz. On his way he saw a barn burning, stopped his carriage, assisted the people, and waited till the flames were nearly extinguished. When

⁵ A spurious Aurora.

he arrived at his friend's house he found Herr von Radowitz, who had previously taken the party to the top of the building to see an Aurora, dilating on terrestrial magnetism, electricity, and so forth. Radowitz asked Stockmar's friend, "Have you seen the beautiful Aurora Borealis?" He replied, "Certainly; I was there myself; it will soon be over." An explanation followed as to the barn on fire: Radowitz was silent some ten minutes, then took up his hat and quietly disappeared.



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