

west at nine o'clock. After this date nine will find them to the north of west and still nearer the horizon. They set about N. W. by W., and this will happen at nine at the end of April. After that you won't see them at this hour until September, when you will find them above the N. E. horizon. Towards the end of October you will have them due east at nine, and at the end of the year nine will again find them on your meridian.

So at nine o'clock you may see the Pleiads somewhere in the sky on any evening from the middle of September to the middle of April. But you need not give them up during all of the other five months. They rise at midnight towards the end of July. If early rising suits you better than late retiring, you may try how soon after May 10th you can see them in the early morning. That's the date when they rise with the sun in our latitude. They set with the sun on May 22nd, and you may also try how close to that date you can still see them in the early evening. The interval between the date of your last sight of them in the early evening and the first in the morning will be the time during which they are visible at no hour. In Hesiod's time, twenty-seven centuries or so ago, and in Boeotia, where he lived, this interval was forty days. Here and now, perhaps you may make it less.

But it is only January as yet, between the middle and end of the month, and we are out doors between seven and eight in the evening. There are the Pleiads on our meridian, due south of our zenith and only  $20^\circ$  from it if we live in the south of Nova Scotia, or  $24^\circ$  in the north of New Brunswick. Before making a closer examination of this particular cluster let us take a look around. A little below and to the left of the Pleiads you see another cluster, V-shaped and with a large red star in it. That's the Hyades, and the red star is Aldebaran, the Bull's Eye. Farther down in the same direction is Orion, the grandest constellation in the heavens, easily recognized by three second magnitude stars in a row and in the middle of a large four-sided figure with first magnitude stars at the upper left and lower right corners. Still farther down and nearly in line with Orion's Belt (the row of three stars) is the Dog-star, the brightest of all the fixed stars. The next brightest above the horizon at this hour and season is Capella, up near the zenith and a little to the east of it. And over in the north-west, close down to the horizon, is Vega, whose acquaintance we made in November. Other first magnitude stars in sight are Procyon, the Little Dog, making a large triangle with the Dog-star and the red first magnitude star in Orion: Pollux, one of the Twins, about half way between Capella and the eastern horizon; and Regulus, in the handle of

the Sickle, just above the horizon a little to the north of east. (If you see what seems to be another first magnitude star near Regulus, look in *Astronomical Notes* for December and you will find out what it is). Except Vega, all our objects so far lie on the east side of the meridian, and most of them in the south-east quarter of the sky. In the north-east you see the Dipper standing on the end of its handle. In the north-west, just south of where Vega is setting, the Cross in Cygnus is beginning to set and now stands upright on the horizon. In the west and still well above the horizon is the Square of Pegasus. Between it and the Pleiads are the three stars in the Ram's head. South of these is the Whale where Mira is now invisible to the eye, but may be found with a glass if you located her well during September and October. Right overhead is Perseus, well marked out by the J which his stars form. Just below him, on the west, lies his wife, Andromeda, and to the north-west is the Chair of his mother-in-law, Cassiopeia.

And now if your neck is not too stiff take another look at the Pleiads. How many do you see—five, six, seven or more? With the naked eye I mean just now. Some can see only five, nearly every one can see six, many can see seven or eight. There are eight in the cluster brighter than sixth magnitude, and all these would be seen by an average eye were it not that the faintest two are close to brighter ones and so have the shine taken out of them. But when the seeing is very good, even an average eye can catch all the eight. And eyes of more than average keenness see more. I know persons who say they see ten. Almost every astronomy book will tell you that eleven are often seen, and that that is the number usually seen by not a few persons. Heis says that is the number he sees. Miss Airy, daughter of the late Astronomer Royal, is said to have seen twelve, and to have correctly mapped their positions. Kelper said that Moestlin saw fourteen, and Webb says that Denning and Carrington see the same number. Von Littrow says he has seen sixteen. How many Cagliostro and Baron Munchausen could see I don't know.

How many can be seen with a glass is, of course, quite a different matter. And here it may be as well to observe that while the cluster is perfectly isolated and has well-defined boundaries as seen by the eye, this is not the case as seen through a glass; and the better the glass the less is this the case. How many stars you can see with your glass within what you consider the limits of the cluster is a question which only you can answer. And even you will find it rather difficult to do so. The number you can see is one thing, the number you can count is another.

Here are some things that may give you some idea as to how many you may expect to see with your