

greater closeness in Zeta's case you will notice another difference between its components and Epsilon's.

If a three-quarter-minute pair is really too close for your glass, try it on Nu Draconis not far from Lyra. That's a one-minute pair and a beauty—a couple of twin stars exactly alike in size and color and almost kissing each other. These two stars—Zeta Lyrae and Nu Draconis—are two of the prettiest doubles for a field glass in the whole heavens. An astronomer with a big telescope would hardly call them doubles at all, his special pets of this kind being only a few seconds or even only a fraction of a second apart; or, like Vega, they are doubles consisting of one very bright and one very faint star. For Vega is double too, its companions being three-quarters of a minute distant, but it is only of the eleventh magnitude and so is quite beyond the reach of a small glass.

A line from Vega through Zeta will find Delta, another double, but too easy to be very interesting.

Zeta and Delta are at two of the four corners of a parallelogram, the other two corners being occupied by Beta and Gamma, brighter than any other stars in the constellation except Vega. Beta is diagonally opposite Delta, and Gamma is opposite Zeta. Near Beta is another easy double, Nu, and Gamma is a still easier one—a treble if you like, but when a small glass throws the stars as far apart as in Gamma's case, perhaps it is just as well to stop talking about doubles. We must draw the line somewhere.

Between Beta and Gamma lies the Ring Nebula of Lyra, the finest object of its kind. Its position you will find marked on the map, but you won't find it in the sky with a field glass. Still it is something to know where such a curious object is situated. You will likely find a cut and a description of it in your astronomy book. If your book is Newcomb's *Popular Astronomy* you will find the cut on page 469 and the description on page 461.

Look at Beta often and compare its brightness with Gamma's and Nu's. It is a variable star and a very peculiar variable, very different from Mira and Algol. (For Mira see *Astronomical Notes* in September REVIEW, for Algol see *Notes* next month—perhaps—or see your book.) Of Beta Lyrae, Newcomb says, "It is remarkable for having two maxima and two minima of unequal brilliancy. If we take it when at its greatest minimum, we find its magnitude to be 4½. In the course of three days it will rise to magnitude 3½. In the course of the week following it will first fall to the fourth magnitude, and increase again to magnitude 3½. In three days more it will drop again to its minimum of magnitude 4½; the period in which it goes through all its changes being

thirteen days. This period is constantly increasing." So far so good; that's about what all the books say. It is very interesting, but it would be more interesting to the star-gazer if a date were given for one of the phases. The "greatest minimum" should fall about 8 p. m. on Nov. 14th. Compare Beta on that evening with Gamma and the nearest Nu. Then at the intervals mentioned above compare them again, and see if you can observe any change.

The star at the top of the constellation on our map is also a variable, but its range is only about half a magnitude. Its name is R Lyrae, its period is 46 days, and its next minimum is due on Nov. 21.

For the REVIEW.

Marking Absent Pupils.

On registering tardiness and school standing, I agree with "An Old Teacher," who expresses his opinion in the last REVIEW; but must take exception to his ideas on the third point to which he refers.

I believe there are teachers who occasionally allow their scholars to take, for other purposes, part of a day that is registered as taught, having a clear understanding with them that, as they prefer it to attending school on Saturday, all the time thus taken is to be made up by working after school hours.

And they occupy the time thus at their disposal with some interesting, useful work which can be made a pleasure rather than a weariness.

And instead of the Government paying for work which is not done a greater number receive the benefit than would by the school being in session on Saturday. For many children cannot attend that day as their help is required at home (especially girls); and some do not attend, as they feel they should have that day for other purposes.

Therefore, I can see no good reason why teachers should not be at liberty thus far to consult the pleasure and convenience of their scholars, exercising in all cases a wise discretion.

J. B.

WE are glad to notice in the October number of the official *Nova Scotian Journal of Education* that the Council of Public Instruction has introduced Latin as an optional subject for the grade B diploma. This is certainly a step in the right direction. We expect among other changes in the near future that Latin will be made imperative. If any man should be an all round scholar it should be the professional teacher; and his knowledge should be much more extensive than the smaller range which he is expected to communicate effectively to his pupils. If the remuneration of the profession is to advance it can only be by the education of the scholarship and skill of the teachers as a body. No other method can be shown to have any possible chance of bettering the financial standing of the profession.