RING PHEASANT.

BY A. G. PRILL, M. D.

PHASIANUS TORQUATUS, (Grml). Common name: Chinese or Mongolian Pheasant.

Habitat: Western United States, Willamette Valley and southward into California.

Description—Male, total length 34 to 40 inches. Length of tail, 15 inches to 24 inches. Bill dark, 1⅜ inches long. Iris yellow. Crown, greyish green, with a white stripe extending over each eye. Around the eyes is found a large red patch of hair feathers.

Neck: Changeable green and purple, following which is a circular band of pure white, extending around the neck, and from this it receives its name.

The breast and points of the shoulders are a changeable, fire red and purplish blue, the border of the feathers being tipped with blue. Following in the median line is a narrow strip of blue feathers, which gradually emerge into black, as we approach the under tail coverts, which are greyish brown.

The tail consists of 16 feathers, the outer ones being shortest and gradually becoming longer, up to 15 or 24 inches, the two centre feathers being longest. The under coloring is greyish black; the upper, brown, with light gray and black, and brown bars.

Upper tail coverts, Irish green, bordered with old gold and tinged with bright green.

Under wing, grayish white. Body light yellow, and end of feathers tipped with blue.

The female has none of the bright markings of the male, and is about two-thirds the size of the male, of a uniform mottled pale yellow, with slight shades of brown, black and gray variously intermixed.

The above description, although deficient in many respects, will, I hope, convey some idea of the beauty of this species. The description is taken from an adult male and female in my collection.

This bird was imported from China by O. N. Denny some eight years ago. Six pair were let loose on Petterson Butte, about four miles from this place (Sodaville, Ore.), and the climatical conditions and country being favorable and being protected by a strict law for six years, they have multiplied rapidly, and now are one of our most common game birds. In fact they multiplied so rapidly that long before the six years' protection had ceased, the farmers complained bitterly that the birds were a serious damage to their grain and gardens, and many birds were killed, but in this I think they were mistaken, for in my examination of many stomachs, at all seasons of the year, I found but very little grain as their food, but many wild seeds, bugs, grasshoppers, etc.

I think that the farmers have realized this, also, to some extent, as nearly all have now posted trespass notices for their protection.

The birds are not as abundant as two years ago, as many were slaughtered by pot hunters for the Portland and San Francisco markets.

The bird is an easy wing shot, but has many devices to deceive the sportsman. I have known them to lie so close that in passing within four feet I did not discover the bird, and the bird will not fly until seen by you, and then it is off like a flash, making a great noise and cackling. They are very swift of foot; it requires a good dog to catch one that has been winged.

The breeding habits are somewhat peculiar. The female deposits her first complement of eggs about April 10 to 15. As soon as the young leave the nest they are taken in charge by the male, and the hen proceeds to lay a second complement of eggs, which in each case is generally ten to fifteen eggs. As soon as hatched the male also takes these in charge, and the female deposits a third sitting, which is generally about eight eggs. When these are out of the shell, one can see the entire band of three broods and male and female together. Two broods are always raised, and in many cases three. Only a few days ago I saw a brood not over ten days old. They nest upon the ground, which is generally a mere hollow, lined with leaves, under some small bush or in a clump of grass and in an open field.

Oat stubble field is a favorite resort, also fern ridges.

In captivity the birds do well and even breed, but are never domesticated, for as soon as let out they at once fly away and do not return.

The bird seems to be fearless, coming into the barnyard and feeding with the fowls.

During the spring the males crow similar to our fowls. This is during the mating season. Their love antics are queer and grotesque.

The males strut around the females, with wings drooped and tail expanded and elevated, all the while uttering a low gutteral sound. This performance is kept up for hours at a time.

During snow storms and frosty weather, many birds are caught here, as in roosting over night the long tails of the males freeze fast in the snow, and they are unable to get up, and one can walk up and pick them up.

I hope that the bird will, in time, be introduced into other parts of the United States and flourish, and thus give to our country one of the most beautiful game birds known.

THE BENDIGO GOLDFIELD.

BY T. S. HALL, M. A., CASTLEMAINE, AUSTRALIA.

THE first portion of a report by Mr. E. J. Dunn, on the Bendigo Goldfield, has just been issued by the Victorian Department of Mines and is full of interesting matter, put both clearly and concisely. The rocks of the field were long ago referred by Prof. Sir F. M'Coy to the same horizon as the Lower Landeilo rocks of Britain. The auriferous quartz reefs show a very peculiar structure. In most cases they occur as lenticular masses, arching over the anticlinal axes. North and south, in the direction of strike, they extend in some cases for miles, while in the direction of the dip they thin out rapidly, rarely extending for 300 feet. Mining operations show a series of the "saddle-reefs," as they are termed, one below the other. In the Lazarus mine, for instance, in sinking 2,200 feet, no less than twenty-four of these "reefs" were encountered. It is evident, that during the process of rock-folding, which has produced an average dip of 65°, cavities were produced between the beds into which the quartz segregated. It is, of course, a well-known fact that the axis of an anticline is rarely a horizontal line, but undulates more or less vertically in the direction of its bearing, but till Mr. Dunn's report, based on careful survey, appeared, the full bearing of this fact on our auriferous rocks was overlooked. This "pitch" of the anticline in Bendigo rarely exceeds 30°, but a case is quoted where it was as high as 60°. As the "saddle-reefs" lie between the bedding planes the "pitch" had, of course, been recognized by the miners, who appropriated for it, most unfortunately, the geological term "dip." As a consequence of this pitch, the deepest rocks are brought to the surface in the central portion of the area, and are the most highly auriferous. Surrounding this area is a larger one, in which the reefs do not yield gold so freely. Surrounding this second area is a third area, consisting of the highest rocks of the district and in which gold has not been found in payable quantities. The extent of the central area is about ten square miles.