

thelial cells by mitotic division in the earlier stages. In the latter respect it tends to agree with Belloy,* who, however, describes active multiplication of these cells, and does not appear to recognise the proliferation of the cells of the theca interna. On the other hand the foregoing account is entirely opposed to the views expressed since the publication of Sobotta's work by His,† Koelliker,‡ Nagel,§ Clark,|| Rabl,¶ and Doering,¶¶ who all more or less clearly describe the corpus luteum as an entirely connective-tissue structure.

It remains to be added that the work is being carried on in the Zoological Department of the University of Edinburgh.

[*Postscript, February 22.*—Since writing the above account of the development of the corpus luteum, I have obtained a 16-hour stage from a sheep which was an unusually late breeder. The characters of the young corpus luteum at this stage are intermediate between those of the 7-hour and 24-hour stages. The inward growth of the connective-tissue cells has begun. The sections pass through the point of rupture, which is widely open.]

“On the Composition and Variations of the Pelvic Plexus in *Acanthias vulgaris*.” By R. C. PUNNETT, B.A., Gonville and Caius College, Cambridge. Communicated by Dr. H. GADOW, F.R.S. Received February 16,—Read March 7, 1901.

(Abstract.)

The facts recorded in this paper may be summarised as follows :—

(1) Considerable variation occurs in *Acanthias vulgaris* with regard to—

- (a) The serial number of the girdle-piercing nerves ;
- (b) The number of the post-girdle nerves ;

* Belloy, “Recherches sur l'origine des corps jaune de l'ovaire chez le rat et le cochon d'Inde,” ‘Comptes Rendus de l'Association des Anatomistes,’ publiés par le Professeur A. Nicolas, première session, Paris, 1899.

† His, } “Verhandlungen der Anatomischen Gesellschaft auf der zwölften
Koelliker, } Versammlung in Kiel,” April, 1898, ‘Anat. Anz.,’ vol. 14.

‡ Nagel, “Die weiblichen Geschlechtsorgane,” ‘Handbuch der Anatomie des Menschen,’ herausg. von K. v. Bardeleben, bd. 7, teil 2, abt. 1, Jena, 1896.

§ Clark, “Ursprung, Wachstum und Ende des Corpus luteum, &c.,” ‘Arch. f. Anat. u. Physiol., Anat. Abth.,’ 1898.

|| Rabl, “Beitrag zur Histologie des Eierstocks,” &c., ‘Anat. Hefte,’ vol. 11, 1898.

¶¶ Doering, “Beitrag zur Streitfrage über die Bildung des Corpus luteum,” ‘Anat. Anz.,’ vol. 16, 1899.

- (c) The number of nerves forming the collector ;
 - (d) The number and position of the nerve canals ;
 - (e) The number of the fin rays ;
 - (f) The number of the whole vertebrae.
- (2) Asymmetry occurred in an appreciable number of cases.
- (3) Differences occurred in the two sexes on the following points :
The position of the girdle is more rostral in the male than in the female. The post-girdle fin innervation area is greater in the male than in the female, owing to the development of the mixipterygium.
- (4) The female is, on the whole, more variable than the male.
- (5) A well-marked correlation exists between—
- (a) The position of the girdle and the number of collector nerves ;
 - (b) The position of the girdle and the number of post-girdle nerves ;
 - (c) The position of the girdle and the number of whole vertebrae.
- (6) No correlation was found between the number of the fin rays and the number of fin nerves.
- (7) At certain stages in ontogeny the number of collector nerves is greater than in the adult.
- (8) At certain stages in ontogeny the number of post-girdle nerves is greater than in the adult. The most caudal two or three of these form a posterior collector—a structure which is never found in the adult.

The facts recorded have been used as criteria between the two rival theories of limb origin with the following results :—

(1) To explain the variations on the side-fold excalation theory, it must be assumed that excalation of segments is going on in the collector and pre-collector areas whilst, at the same time, intercalation is taking place in the post-girdle area ; or, in other words, that the portion of the vertebral column in front of the girdle is tending to split up into fewer segments, whilst simultaneously that portion behind the girdle is tending to become divided into more segments. Leaving on one side the improbability of two contiguous portions of the vertebral column undergoing at the same time two opposite processes, an examination of the number of whole vertebrae associated with different positions of the girdle lends practically no support to the view that intercalation is going on in this area.

(2) On the side-fold excalation theory, an explanation of the variations in the position and number of the nerve canals of the girdle, and of the occasional instances of asymmetry, necessitates the assumption

that the pelvic girdle in different specimens is not homologous—an assumption which at present seems unjustifiable.

(3) The different variations observed are not discordant with the view that the limb is capable of migrating along the body, on which view it must be supposed that a secondary rostral migration has followed a primary caudal one. Moreover, such a view receives confirmation from the existence of a posterior collector and of a more extensive anterior collector in certain embryonic stages.

“Further Observations on Nova Persei.” By Sir NORMAN LOCKYER, K.C.B., F.R.S. Received and Read March 7, 1901.

[PLATE 1.]

Since the preliminary note on this star was communicated to the Royal Society on February 28th, observations have been possible on the nights of February 28th, March 1st, 3rd, and 5th, and twenty-four photographs of the spectrum have been taken with the instruments before detailed.

It may be stated generally that the light is slowly waning. On February 28th the star was only slightly brighter than α Persei. On March 1st it was estimated as about equal to α Persei, *i.e.*, about 2.0 magnitude. When it was again visible on the evening of March 3rd, it was distinctly less bright than β Persei, and its magnitude probably near 2.5; on the 5th its estimated magnitude was 2.7.

The above refers to the visual brightness. A photograph of the region occupied by the Nova on March 3rd showed it to be photographically brighter than α Persei.

General Description of the Spectrum.

The photographs show that the bright hydrogen lines are successively feebler as the ultra-violet is approached, and the whole of the series of hydrogen lines have during the past week become relatively brighter with respect to the remaining lines and the continuous spectrum. The spectrum extends far into the ultra-violet.

Among the changes which have taken place in the visible part of the spectrum, it may be mentioned that while the lines of hydrogen have become relatively brighter during the past week, the remaining lines, with the possible exception of the prominent one at λ 5169, have become distinctly dimmer. There has also been a diminution of the intensity of the continuous spectrum. The line in the yellow, the identity of which has not yet been definitely determined, has gradually decreased in intensity with the diminution of brightness of the star.