

limb, back turned toward the rear" (p. 16). "... Pass them . . . over the lean flesh" (p. 17). "... Detach the skin from a circular surface, within the incision from the inferior radius" (p. 19). "Pass all the threads first, afterwards commence by tying those in the middle. . . . In tying (sic) the threads . . ." (p. 23). "The lips are brought face to face" (p. 24). "Bayer's suture . . . is convenient for those wounds with uncovering of the skin" (p. 26). "If two limbs are to be operated upon, cauterise the internal face of one, and the external face of the other. If two limbs are cauterised, operate upon the internal face of one, and the external face of the other" (p. 26). "One gradually augments the duration of the application of the cautery to the same degree as it cools" (p. 29). "With a second cut of the bistoury separate the sternohyoidean and sternothyroidean muscles upon the median line; these muscles and the cutaneous lips should be divided by means of tenaculums . . ." (p. 35). "In passing the catheter . . . take a position even with the right flank" (p. 48). "The operatory act essential to urethrotomy . . ." (p. 49). "The thread passes through the three intestinal walls; the ends are curved" (p. 73). "Suture for abrasion; muco-mucous suture by infection" (sic) (p. 76). "On the internal face of the hough" (p. 96). "During the execution of this last manoeuvre (sic) . . ." (p. 108). The directions for bandaging a foot after operation for sandcrack suggest dancing at a wake. "Cover the wound with wadding of turf . . . make circles around the phalanges and reverse upon the plantar region. Envelope the dressing in a sheet of linen and furnish the whole with a double plait of straw." Again, "Cover the wound with phlegdets (sic) superposed to overflowing over the sides and above the gap. Secure them with a roller bandage; passing the first, turn to the middle, the second above the third, and the balance successively above and below, making as many reverses as may be necessary, being careful that each turn of the bandage covers the inferior two-thirds of that which preceded, and being covered in its inferior two-thirds by the turn that follows . . . All turns of the bandage should be passed behind between the end and the branches of the shoe" (pp. 108-9). It may be that these dressings are first-rate and even easy to apply, but the description conceals their advantages. Directions, whether original or translated, should be so worded as to be easily understood. Puzzles in bandaging and minor surgery only serve to evoke expressions which few persons care to write. Prof. Biting's book has some good points, but these are neither sufficiently striking nor important to merit special mention. It would be advisable to have the proofs of the next edition carefully revised by someone conversant with practical equine surgery. J. M.

Outlines of Veterinary Anatomy by O. CHARNOCK BRADLEY, M.R.C.V.S.,
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London: Baillière, Tindall & Cox.

TWELVE months ago we reviewed the first part of this work, and during the summer the remainder of the book has come to hand. A careful perusal of Parts II. and III. has not changed the opinion we expressed upon Part I.—indeed we are more than ever convinced that book-making has been the object, and not a serious effort to give us an original work. We cannot understand what method, if any, the author has followed; we have not here a systematic work, nor can it be of much value as a dissecting guide. That it may assist a student who already knows his work and has a short time at his disposal for rapid revision we do not doubt, but then he will not fail to find mistakes, some trivial, others serious, several amusing if not ludicrous.

Moreover, we must offer our opinion that if "the actual organs of the ox, sheep, pig, and dog do not commonly find their way into the dissecting rooms" (preface, Part II.), then the veterinary student, if he has to trust to text-books for his knowledge of comparative splanchnology, is in a very poor way indeed. Nor do we think that the illustrations in the present work will help him, since, for example, the spleen of the sheep is represented on the same page as about three times the size of the same organ in the cow!

Exigencies of space forbid us from giving more than a few of the errors, but we may briefly note in Part II. that the mediastinum is not a space (45); that the thymus gland is to be found (a fact that is not mentioned) between the layers of the anterior mediastinum during early life; that the bronchi have not a separate innervation from the lungs (48-49); that the foramen ovale is not present in the adult heart, though the fossa ovalis may be less distinct in the left auricle than in the right (53); that the endocardium itself has no colour; that the os cordis does not arise from ossification of the auriculo-ventricular rings (54); that (79) the dura mater has not dilated and contracted portions agreeing with those of the neural canal. It responds to the cord and not to the neural canal. The author confuses outlet with inlet of the pelvis, and less than six lines is considered sufficient for the description of the peritoneum. Brünner's glands are misplaced; they are submucous in position (86). The structure of the mucous membrane of the abomassum is said "to be similar to that of the stomach of the horse" (148). The longitudinal fibres of the rectum that have insertion into the anterior coccygeal bones are erroneously described as forming the levator ani muscle. Retractor ani and levator ani are synonyms. We are glad to see that the correct nomenclature is applied to the lobes of the liver. The apology for venerable authorities at the foot of page 93 was wholly unnecessary. It is unusual to describe the kidney as possessing a serous covering (102). The ligaments of the bladder are unnecessarily multiplied, and the anterior false ligament is described as containing the urachus, "which is the remains of a foetal structure." The urachus was an important foetal duct, and, of course, lost its vocation when intrauterine life ended. The scar found at the fundus of the bladder is the indication of the attachment of that foetal duct (108). The cremaster muscle forms no part of the covering of the testicle; it is a dependency of the obliquus abdominis internus muscle, and a constituent of the cord (115). Cowper's glands has a structure of its own, and does not resemble that of the prostate gland.

On page 116 appears the following: 2 "*Erector Penis*. This is a small muscle passing between the tuber ischii to the penis, raising and retracting that organ." This is very funny, or would be if the author had been writing a burlesque, but it would be a serious blunder for a student to make if he gave the above description in an examination. It savours strongly of Strangeways. Chauveau would have been more trustworthy.

As to the comparative portion in this part, it is a mere abridgement of the larger works, and there are certain important omissions. The commonest papillae of the rumen, the foliaceous, are not mentioned. The large intestine of the pig is said to be similar to that of the ruminant, but whether in appearance or disposition within the abdominal cavity is not stated. The most striking feature of the pig's liver, its pronounced lobulation, is not even noticed (152). "Two glandular diverticuli open *out of the anus* of the dog" (sic); the anus itself is usually defined as an opening. Cowper's glands are said to be absent from the pig. Gärtner's canals in the cow are said to "pass from the lateral walls (of the vagina) to near the meatus urinarius," and on the same page "*the vulva* of the pig has Gärtner's canals as in the cow."

In Part III., which to our mind is the best of the three, there are certain

errors which should not have appeared. A typical vertebra is described (55) and figured (54) as possessing a vertebral foramen; this it does not any more than its transverse process possesses one or more articular facets. The foramen cæcum of Morgagni is described as found in the tongue of the horse. It certainly is not. Chauveau wrongly describes and figures a circumvallate papillæ as the foramen cæcum (2nd English edition, 403). The foramen cæcum as observed in the human tongue is a blind pit placed behind the intersection of the converging lines upon which the circumvallate papillæ are found. It is said to represent the fetal thyro-glossal duct. Comparing pages 97, 106, 107, and 108, we find that the molar glands have escaped description. On 114 the author confuses Stenson's canal and Jacobson's organ. The canal that has an opening upon the floor of the nose, and in the horse terminates blindly in the cartilage of the naso-palatine cleft, is the canal of Stenson. Jacobson's organ passes backwards from Stenson's canal up the nose and lies embedded in the connective tissues close to the attachment of the septum nasi to the vomer. It has a cartilaginous framework, is some 4 or 5 inches long, and is accessory to the sense of smell. On 116 the foramen in the wing of the thyroid cartilage is ignored, and on 121 the thyro-arytenoid muscle is said to "govern the tension of the vocal cords;" if this means to relax the cords it is correct. The portion dealing with the brain is the best in the whole work; it is very concise and so far as it goes we have no fault to find, though we might here and there think it did not go far enough. But we have said sufficient; we have endeavoured to read the book as the author desires us to do in his preface, and the observations we have made have been made in no carping spirit. Descriptions are right or wrong, inadequate and thereby often misleading, or verbose and frequently muddled, and though we do not wish to say that any of these apply to the work as a whole, yet we think in many places more might have been given with profit to the reader. In the event of a second edition we hope for more from the author himself than a mere arrangement of the subject, and trust that the many signs of haste which we have pointed out will be rectified.

A. E. M.

Diseases of the Dog and their Treatment. By Dr Georg Müller, Director of the Clinic for small animals at the Veterinary High School at Dresden. Translated, revised, and augmented by Alexander Glass, A.M., V.S., Lecturer on Canine Pathology at the University of Pennsylvania, with ninety-three illustrations. Philadelphia: W. Horace Hoskins, 1897.

It was once observed of the biography of a great man recently deceased that the author of it had added a new terror to death. With equal cause it might be said that the translator of this work has added a new terror to the lives of German veterinary authors. The original work is a book of considerable merit, and it well deserved to be made accessible to the English-speaking veterinary student. We greatly regret that the translator has performed his task so atrociously as to make it impossible for a conscientious reviewer to say a favourable word of the result of his labours. Nearly every page of the book, including even the author's preface, contains passages that are mangled almost beyond recognition, and the translation is bad, not only in that it frequently gives an erroneous rendering of the author's meaning, but also because the product is execrable English. Hundreds of passages might be quoted to show that the Mr Glass is not familiar with German, and, what is much more discreditable, is unable to arrange the words of his own language grammatically. Bad as this is, it does not make up the sum of his offences, for he omits important statements found in the original, and by way of com-