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ANATOMICAL NOMENCLATURE.

In this and in the preceding number considerable space is devoted to a somewhat elaborate discussion of the general subject of Anatomical Nomenclature, accompanied by practical suggestions with regard to the brain.

When we consider that, as stated by Professor Wilder, the brain presents about 150 parts or regions which are visible to the unaided eye, that these parts are more and more frequently mentioned in connection with the progressive sciences of Anatomy, Zoology, Physiology and Psychology, and yet that many of them have received from two to a dozen, more or less, ponderous names, there would seem to be no question as to the desirability of some improvement upon the existing terminology.

The author of this article has undertaken to amend the matter by selecting the shortest or otherwise most appropriate one of the several names by which some parts are known, or by abbreviating descriptive phrases either by discarding all but the most significant word, or converting qualifying adjectives into prefixes, or, in a few cases, mostly of parts observed by himself, by proposing new terms altogether.

The fact is, as every original investigator is aware, all scientific nomenclature is more or less provisional, and must be constantly modified to suit the additions to knowledge and the clearing-up of ideas. The author has given a few instances of the employment of new terms by modern writers, and many more might have been adduced. Marsh uses "postpubis," Huxley "epipubes, pylangium, synangium, intraovular;" Foster employs—if he did not originate—"hemisection and aspychical;" "orad" is used by Thacher in place of *cephalad*, while "dorsad" occurs in recent writings of Mivart, and in Huxley's latest utterance, the paper on "Evolution," parts of which were reprinted in this journal.

Among all the arguments in favor of some modification of the existing nomenclature, the strongest—to the mind of the unprejudiced layman—is, perhaps, the very one which will least commend itself to the professional anatomist: namely, that the ease and comfort of those now living should be held of little moment as compared with any advantage which the change may confer upon the "vastly more numerous anatomical workers of the future."

Those who object to the strictly technical construction of the proposed vocabulary should try to realize what would be the outcome of a total disuse of all technical terms, and the substitution therefor of the vernacular words which are current among the people of the various countries in which anatomy is cultivated. Ancient Babylon would have a parallel in modern Science, and there would result confusion, misunderstanding, contention, and finally apathy and ignorance. Professor Wilder has evidently prepared his article in the hope of eliciting criticism from the working-anatomists of all parts of the world, and not with a view to the hasty praise or dissent of English-speakers alone.

The pages of "SCIENCE" are open to the fullest and freest discussion of the whole subject.

A PARTIAL REVISION OF ANATOMICAL NOMENCLATURE, WITH ESPECIAL REFERENCE TO THAT OF THE BRAIN.*

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II.

GENERAL NAMES OF ORGANS, AND THEIR ABBREVIATIONS.

For ease of reference these words are arranged in the alphabetical order of their abbreviations.

A.—Area. Ar.—Arteria. Ath.—Arthron, joint, articulation. B.—Bulbus. C.—Cœlia; ventricle of the brain. Cd.—Condylus. Co.—Columna. Cn.—Canalis. Cp.—Corpus. Crn.—Corona. Cr.—Crus. Cs.—Commissura. Ctl.—Cartilago. Dg.—Digitus, finger or thumb. Dm.—Dimidium; half. Dt.—Dactylus; toe, digitus pedis. Dv.—Divisio. F.—Fissura. Fm.—Foramen. Fs.—Fossa. Fsc.—Fascia. Gl.—Glandula. G.—Gyrus; convolution. L.—Lobus. Lc.—Locus. Lg.—Ligamentum. Ll.—Lobulus. Ln.—Linea. M.—Musculus. Mb.—Membrana. Math.—Mesarthron; segment. N.—Nervus. O.—Os. P.—Portio. Pl.—Plexus. R.—Recessus. Rg.—Regio. Rm.—Ramus. Rx.—Radix; root. S.—Sinus. Sb.—Substantia. Sl.—Sulcus. Sp.—Spina. Spt.—Septum. T.—Tuber. Tu.—Tuberositas. Tbl.—Tuberculum. Tr.—Tractus. V.—Vena.

LIST OF NAMES OF PARTS OR FEATURES OF THE BRAIN.

This list includes between 150 and 160 names. Unless otherwise stated they apply to the brains of Man and the Domestic Cat. Most of the names refer to more

* Continued from No. 38, page 126, March 19, 1881.

or less distinct parts, but a few indicate general regions, or areas which are distinguishable by color or elevation. No purely histological features are referred to. Some parts of the cerebellum and medulla are omitted altogether. The names of the fissures of the cat's cerebrum have been discussed in a previous paper, 8.

In each case, the name first given is regarded as preferable ; but occasionally I have indicated the desirability of a better one. So much of each name as is printed in small capitals is regarded as a sufficient designation of the part under ordinary circumstances ; sometimes it may be desirable to add the words in parenthesis. Most of the names are those in common use, with the omission of superfluous elements like *corpus*, and the genitives of the names of more comprehensive parts. Most of the apparently new names will be found to be old acquaintances under such thin disguises as *translation, transposition, abridgement*, and the *substitution of prefixes* for qualifying words. In a few cases the old names are wholly discarded for briefer new ones. Most of the new names, however, refer to parts apparently unobserved hitherto (*e. g., crista, carina, delta,*) or to parts which—although probably observed—seem not to have been regarded as needing a special designation, (*e. g., aula, quadrans, corpus præpontile.*)

Let me express here my desire to be favored with the fullest and freest criticism, both as to the general questions involved in this revision, and as to the special terms here proposed.

ALBICANS, (Corpus).—*abn.*—C. *candicans, c. mammillare*, etc. Unable to ascertain which of its many titles has priority, I select that which indicates its most obvious feature on the fresh brain.

AMYGDALA, (cerebelli).—*ag. cbl.*

ARACHNOIDEA, (Membrana).—*Ach.*—The arachnoid layer.

AREA CRURALIS.—*Ar. cr.*—The general region of the base of the brain between the pons and the chiasma. The middle region, or region of the isthmus.

AREA ELLIPTICA.—*A. el.*—An area, in the cat, just laterad of the ventripyramis. Perhaps it represents the "inferior olive."

AREA INTERCRURALIS.—*Ar. icr.*—The interpeduncular space. The mesal part of the *Area cruralis.*

AREA POSTPONTILIS.—*Ar. ppn.*—The ventral aspect of the metencephalon, (medulla). The caudal one of the three general regions into which the base of the brain may be conveniently divided for description. It is more extensive, relatively, in the cat than in man.

It will be noted that the adjective *pontilis* follows the analogy of *gentilis* rather than *montanus* or *fontinalis.* The form *pontal*, however, has been used by Owen. (A, III).

AREA PRÆCHIASMATICA.—*Ar. prch.*—The cephalic one of the three areas of the base of the brain. The space cephalad of the chiasma.

ARBOR VITÆ (cerebelli).—*Arb.*

AULA.—*a.*—The cephalic portion of the third ventricle; the prethalamic part of the "third ventricle," between the two portæ, or *foramina Monroi;* 'aula,' Wilder, 3 and 5." "The here common ventricular cavity," in *Menobranchus*, Spitzka, 6, 31. This represents the cavity of the "unpaired hemisphere vesicle," formed by a protrusion from, or constriction of, the "anterior primary encephalic vesicle," the aula is relatively larger in some of the lower vertebrates.

AULIPLEXUS.—*apx.*—The plexus of the *aula.* The free border of the fold of *pia*, known as the *velum*, forms a vascular plexus in the *aula*, in each *porta*, and in the *medicornu* of the *procœlia.* In place of compound terms, like *plexus aulæ*, etc., I suggest that single terms be formed, *auliplexus, portiplexus*, and *proplexus.* For the plexuses of the dicœlia and metacœlia—the "third" and "fourth ventricles"—we may use *diplexus* and *metaplexus.*

BASICOMMISSURA.—*bcs.* "The basilar commissure of the thalami," Spitzka, 2, 14. The ventral continuity of the two thalami.

BIVENTER (cerebelli).—*bv.*—The biventral lobe of the cerebellum.

BULBUS OLFACTORIUS.—*B. ol.* The olfactory bulb. The more or less expanded cephalic part of each lateral half of the rhinencephalon, consisting of the *pes* and *pero.* Often called *olfactory lobe.*

CALAMUS (scriptorius).—*clm.*

CALCAR (avis).—*clc. Hypocampa*, or *hippocampus minor.*

CALLOSUM, (corpus).—*cl.—Commissura cerebri maxima, trabs medullaris*, etc.

CANALIS CENTRALIS (myelonis).—*Cn.ce.*—The central canal of the spinal cord.

CARINA (fornicis).—*ca.*—The mesal ridge of the caudo-ventral surface of the *fornix*, dorso-caudad of the *crista.* I am not sure of its existence in man.

CAUDA STRIATI.—*cd. s.*—"Surcingle," Dalton (1, 13) ; the slender continuation of the *striatum* caudo-ventrad. If a new name is required for this longer "tail," which was described by Cuvier (B. III, 51), as forming, with the striatum proper, a "horse-shoe," Prof. Dalton's "surcingle" may be technically rendered "cingulum." I have not yet looked for the *cauda* in the cat.

CEREBELLUM.—*cbl.*—Several of the external features of the *cerebellum* are omitted from this paper.

CEREBRUM.—*cb.*—The *prosencephalon*, less the *striata.* The *hemisphæræ.*

CHIASMA (opticum, or nervorum opticorum).—*ch.*—The optic chiasma or commissure.

CIMBIA.—*cmb.*—"*Tractus transversus pedunculi*," Gudden, as quoted by Meynert (A, 737). A slender white band across the ventral surface of the *crus cerebri.* It is a distinct ridge in the cat. The word is used in architecture to denote a *band* or *fillet* about a pillar, and is here proposed as a fitting substitute for Gudden's descriptive name.

CINEREA, (substantia).—*c.*—The gray matter of the nervous organs.

CLAUSTRUM.—*cls.*—The "*claustrum*," (Burdach) ; "*nucleus tæniæformis*," (Arnold), as stated by Quain, A. II, 564.

COLUMNA (fornicis).—*Co. f.*—The anterior pillar of the fornix, assuming that there is one upon each side. It would be convenient to have a single short name.

CŒLIA.—*C.*—A ventricle of the *encephalon.* For a brief statement of the reasons for substituting this for the word *ventriculus*, see elsewhere in this article.

COMMISSURA FORNICIS.—*Cs. f.*—In the cat, a distinct band across the caudal aspect of the *fornix* just ventrad of the *crista*, and apparently uniting the two columnæ more closely.

COMMISSURA HABENARUM.—*cs. h.*—A white band connecting the caudal ends of the habenæ, and forming the dorsal border of the *Fm. conarii.*

CONARIUM.—*cn.*—The *glandula pinealis. Epiphysis cerebri. Penis cerebri.*

CORONA RADIATA.—*Cn. r.—C. radians.*

CORPUS PRÆPONTILE.—*Cp. prp.*—A slight white longitudinal ridge of the *postperforatus*, near the meson. It is distinct in the cat. When more fully known, perhaps a better name may be found.

CORTEX (cerebri, or cerebelli).—*ctx.*—The ectal layer of gray and white substance at the surface of the cerebrum and cerebellum.

CRENA (calami).—*crn.*—The caudal end or notch of the metacœlia.

CRISTA (fornicis).—*crs.*—A small but, in the cat, very distinct ovoid mesal elevation of the caudal surface of the *fornix*, ventrad of the *carina*, and dorsad of the *commissura fornicis*, and the *recessus aulæ.* It is also present in the human brain. Wilder, 7.

CRUS CEREBRI.—*Cr. cb.*—Pedunculus cerebri.

CRUS OLFACTORIUM.—*Cr. ol.*—The isthmus by which the *bulbus olf.* is connected with the *prosen.*

CRUSTA (cruris cerebri). *cst.*

DECUSSATIO PINIFORMIS.—*dc. pnf.*—"Finiform decussation," Spitzka.

DECUSSATIO VENTRIPYRAMIDUM.—*dc. vpy.*—The "decussation of the anterior pyramids."

DELTA (fornicis).—*d.*—A subtriangular area of the ventro-caudal surface of the fornix of the cat. The lateral angles are at the *portæ*, and the apex points dorso-caudad. It is bounded by the lines of reflection of the *endyma*, and represents the entocœlian surface of the *fornix*. Wilder, 5. It probably exists in man.

DENTATUM, (corpus cerebelli).—*dnt.*

DISTELA.—*dtl.*—The *tela vasculosa* forming the membraneous roof of the *dicœlia* or "third ventricle."

DIENCEPHALON. — *den.* — The *thalamencephalon, deutencephalon, inter-brain*, enclosing the *dicœlia*. Whether it should include also the *aula* and its walls is to be determined by reference to the condition of the parts in some of the lower vertebrates.

DORSIPYRAMIS.—*dpy.*—The *posterior pyramid* of the *metencephalon.*

DICŒLIA.—*dc.*—The "third ventricle," or "*ventriculus tertius*," less the *aula*. The interthalamic space, reduced in mammals by the *medicommissura.*

DIPLEXUS.—*dpl.*—The plexus of the "third ventricle."

ENCEPHALON.—*en.*—The brain, including the *medulla* or *metencephalon.*

ENDYMA.—*end.*—*Ependyma.* Lining membrane of the ventricles.

EPENCEPHALON.—*epen.*—The hind-brain, or *cerebellum* with the *pons* and its peduncles, and the corresponding part of the *medulla*. It is difficult, perhaps impossible, to define exactly the limits of the epen. and the metencephalon, and of their respective cavities.

EPICŒLIA.—*epc.*—The division of the ventricular cavity corresponding with the cerebellum. Perfectly distinct in the cat, and even in man, but relatively more extensive in many of the lower vertebrates.

FASCIOLA.—*fscl.*—May not this single word take the place of *fasciola cinerea* and *fascia dentata?* The parts are continuous, and the latter is not *dentate* in the cat.

FILUM TERMINALE (myelonis).—*fl. t.*

FIMBRIA.—*fmb.*—*Corpus fimbriatum. Tænia hippocampi.* "*Fimbria*," Meyn. A, 667.

FLOCCULUS.—*flc.*—*Lobulus pneumogastricus.* The flocks. This seems to be a different part from the *lobulus appendicularis* of the carnivora, with which it has been sometimes confounded.

FORAMEN CÆCUM.—*Fm. c.*—"*Fossa cæca*," Spitzka, 3, 6. *Foramen cæcum* is used by Dunglison and Vicq D'Azyr (A, pl. xviii., "48"), and should be retained, notwithstanding the somewhat unusual application of the word *foramen.*

FORAMEN INFUNDIBULI.—*Fm. inf.*—The orifice in the *tuber cinereum* left after the removal of the *hypophysis* and *infundibulum.*

FORAMEN MAGENDIE.—*Fm. mg.*—The communication of the *metacœlia* with the "subarachnoid space." Not having satisfied myself as to the nature of this communication, I prefer to quote from Quain, A, ii., 513.

FORNIX.—*f.*—*Camara. Testudo cerebri*, &c.

GENU.—*g.*—*Genu callosi.*

HABENA. — *h.* — *Habenula. Pedunculus pinealis.* There seems to be no need of using the longer word. According to my observations, the *habenæ* have a distinct morphical significance as nearly corresponding with the lines along which the *endyma* is reflected toward the opposite side; 5 and 7.

HYPOPHYSIS.—*hy.*—Pituitary body.

HYPOCAMPA.—*hym.*—*Hyppocampus major.* The reasons for preferring the form employed by Vicq D'Azyr are presented elsewhere in this article.

ITER.—*i.*—*Iter a tertio ad ventriculum quartum. Aquæductus Sylvii.* A convenient name for the contracted mesocœlia of man and most mammals.

INSULA.—*ins.*—Island of Reil. *Lobus centralis. Insula cerebri. Gyri operti.*

INFUNDIBULUM.—*inf.*—*Infundibulum cerebri*, &c.

INTEROPTICUS.—(*lobus*).—*iop.*—The interoptic lobe; Spitzka, 4, 98; 5. In some reptiles.

LEMNISCUS INFERIOR.—*lmn. i.*—Spitzka, 4, 95 and 100.

LEMNISCUS SUPERIOR.—*lmn. s.*—I have not been able to identify these parts in the cat.

LIGULA.—*lg.*—"Ponticulus." Ligula, Quain, A, 11, 506.

LIMES ALBA.—*lm. a.*—*Limes alba radicis lateralis rhinencephali.* The white stripe of the lateral root of the rhinencephalon. Perfectly distinct in the fresh brain of the cat.

LIMES CINEREA.—*lm. c.*—The gray stripe of the radix lateralis.

LIQUOR VENTRICULI.—*lq. vn.*—This term is used by Mihalk. A, 163. Is a better one to be found?

LOBULUS APPENDICULARIS (cerebelli). *Ll. ap.* The appendicular lobule of the *cerebellum* of many carnivora, and perhaps other mammals. It seems to have been confounded in some cases with the human *flocculus*, but more probably represents the lateral lobes of the cerebellum. Its relations should be studied in a series of related forms. See my paper, 11, 217.

LOBULUS OLFACTORIUS.—*L. ol.* — The olfactory lobe of the hemisphere. A part of the hemisphere said to be in more direct connection with the rhinencephalon.

LOBUS OLFACTORIUS.—*L. ol.*—A general name for either half of the rhinencephalon, including the crus and the bulbus.

LOCUS NIGER.—*lc. n.*—The *locus niger* of the *crus cerebri*, between the *tegmentum* and the *crusta.*

MEDICOMMISSURA.—*mcs.*—*Commissura mollis.* Middle commissure. "Thalamic fusion," Spitzka.

MEDICORNU (procœliæ).—*mcu.*—*Cornu temporale.* The middle or descending horn of the "lateral ventricle."

MEDIPEDUNCULUS (cerebelli).—*mpd.*—*Crus ad pontem.* Middle peduncle of the cerebellum.

MESENCEPHALON.—*men.*—The mid-brain. The *lobi optici, postoptici and interoptici*, with the corresponding *crura cerebri.*

MESOCŒLIA.—*msc.* The ventricular division corresponding with the *mesencephalon.* In man and most mammals it is usually reduced and known as *iter*, or *aquæductus Sylvii.*

METATELA.—*mtl.*—The membraneous roof of the *metacœlia*, or "fourth ventricle."

METACŒLIA.—*mtc.*—The "fourth ventricle," *ventriculus quartus.* Ventricle of the metencephalon.

METAPLEXUS.—*mtpl.*—The *plexus choroideus* of the *metacœlia.*

MONTICULUS (cerebri).—*mnt.*—The ventral prominence of the *lobus temporalis.* Natiform protuberance. *Alveus. Subiculum.*

MYELENCEPHALON.—*myen.*—The cerebro-spinal axis. The term was proposed by Owen.

MYELON.—*my.*—The spinal cord. Owen. Huxley.

NERVUS OLFACTORIUS.—*N. ol.*—Olfactory nerve.

NUCLEUS LENTICULARIS.—*nc.ln.*—*Nucleus lentiformis.* Meynert.

OBEX.—I have not identified this part.

OLIVA.—*o.*—*corpus olivarium.* Olivary body. Olive. The "inferior olive." Spitzka.

OPTICUS, (lobus). *Natis cerebri.* An optic lobe, excluding the *postopticus and interopticus.*

PERO (olfactorius).—*po.*—The softer cap, or shoe-like covering of the rhinencephalic lobe, from which the *nervi olfactorii* directly spring. In the cat this may be accurate-

ly removed from the *pes ol.* The Latin *pero* denoted a sort of boot made of raw hide.

PES OLFACTORIUS.—*ps. ol.*—The firmer ental portion of each rhinencephalic lobe. As it is the termination of the crus, and has, in the cat, a somewhat foot-like shape, I suggest the above name for it.

PIA (mater).—*pi*— In the cat's brain there are indications of at least two layers of the *pia.*

PONS (Varolii).—*pn.*—*Tuber annulare*, etc. There seems to be no need of the qualifying genitive.

PONTIBRACHIUM.—*pnbr.*—*"brachium pontis;"* Spitzka, 4, 100.

PORTIO DEPRESSA (præperforati).—*Pt. d.*—In the cat the (*locus*) *præperforatus* is distinctly divided into two portions, the caudal of which is depressed, while the cephalic is elevated, and sometimes furrowed. Briefer names are desirable.

PORTIO PROMINENS (præperforati).—*Pt. p.*

POSTBRACHIUM (mesen.).—*pbr.*—*Brachium posterius.*

PRÆBRACHIUM (mesen.).—*prbr.*—*Brachium anterius.* I have not identified these parts.

PORTIPLEXUS,—*ppl.*—The small portion of the free border of the *velum* which hangs in the *porta.*

POSTCOMMISSURA.—*pcs.*—*Commissura posterior cerebri.* The posterior commissure.

PRÆCOMMISSURA.—*prcs.*—*Commissura anterior.*

POSTGENICULATUM, (corpus).—*pgn.*—*Corpus geniculatum internum.*

PRÆGENICULATUM, (corpus).—*prgn.*—*corpus geniculatum externum.*

POSTOPTICUS, (lobus).—*pop.*—*Testis cerebri.* The caudal eminence of the *"corpus quadrigeminum."* "Postoptic lobe," Spitzka, 4, 100, and 103.

POSTPEDUNCULUS (cerebelli).—*ppd.*—*Crus cerebelli ad medullam.* Inferior peduncle.

PRÆPEDUNCULUS.—*prpd.*—*Crus seu processus ad corpus quadrigeminum.* Superior peduncle of cerebellum.

POSTPERFORATUS, (locus).—*ppf.*—*Locus perforatus posticus.* Posterior perforated space. *Pons Tarini.*

PRÆPERFORATUS.—*prpf. Locus perf. anticus.*

PROCŒLIA.—*prc.*—Ventricle of the prosencephalon, "Lateral ventricle."

PROPLEXUS.—*prp.*—The plexus of the *medicornu* of the *procœlia.* It is the long free border of the *velum*, and, still covered by the *endyma*, enters by the rima. It is continuous with the *portiplexus*, and extends to near the tip of the *medicornu.*

PROSENCEPHALON.—*pren.*—The cerebral hemispheres *; cerebrum* less the *striatum* ; the fore-brain.

PROTERMA.—*prtr.*—The primitive *lamina terminalis* or *l. cinerea. Terma embryonis.* My reason for suggesting different terms for the adult and embryonic terminal plate, is that, as now understood, the latter includes not only the *lamina cinerea* of anthropotomy, but also the parts afterward differentiated to form the *columnæ fornicis*, and the *præcommissura*, with perhaps some other parts of the *fornix.*

PSEUDOCŒLIA.—*psc.*—*Ventriculus septi pellucidi.* "Duncan's höhle," Lœwe, A, 13. Fifth ventricle. This is not a true member of the cœlian series. If it ever presented an opening into the *aula*, it is because of some injury which has torn the brain. This point was urged by me in the unpublished paper No. 4.

PULVINAR.—*plv.*—*Pulvinar thalami.* The posterior tubercle of the human *thalamus.*

QUADRANS, (cruris cerebri).—*q.*—In the cat, a depressed area approximately equal to the fourth of a circle, upon the ventral surface of the *crus*, in its meso-cephalic angle.

RADIX INTERMEDIA (rhinencephali).—*Rx.* 1.—The middle root of the *rhinencephalon.* In anthropotomy, the *middle* root of the olfactory nerve. In the cat it is little more than a sub-triangular interval between the RR. *lateralis* and *mesalis.*

RADIX MESALIS.—*Rx. m.*—The mesal root of the *rhinencephalon.* The "internal root of the olf. nerve." In the cat, it turns pretty sharply from the ventral to the mesal aspect of the brain.

RADIX LATERALIS.—*Rx. l.*—The lateral root of the *rhinen.* The "external root of the olf. nerve." In the cat it presents a gray and a white stripe—*limes cinerea* and *l. alba.*

RECESSUS AULÆ.—*R. a.*—A small depression between the two *columnæ fornicis*, and ventrad of the *crista.* The aulic recess.

RECESSUS CONARII.—*R. cn.*—*"Recessus pinealis,"* Reich. A, Taf. ix, *rp.*

RECESSUS OPTICUS.—*R. op.*—This is a pyramidal recess, just dorsad of the *chiasma*, the apex pointing laterad. The term is used by Mihalkovics, A, 79.

RECESSUS PRÆPONTILIS.—*R. prpn.*—The mesal depression which is overhung by the cephalic border of the *pons.* Its floor is formed by the caudal part of the *postperforatus.*

REGIO AULICA.—*Rg. a.*—It may be convenient sometimes to employ this term as a designation for the general region, of which the *aula* is the center. Within a short distance of the *aula* are many parts of great morphical importance; the whole brain seems to converge thereto. Whoever understands the aulic region will find no serious difficulty with the gross anatomy of other parts.

RESTIFORME, (corpus).—*Rf.*—The restiform body of the *metencephalon.*

RHINENCEPHALON.—*rhen.*—The division of the brain, which is united with the cephalic end of the base of the *prosencephalon*, and connected by the *nervi olfactorii* with the *nares.* Each lateral *lobus* includes a *crus* with its *radices*, and the *bulbus olfactorius*, consisting of the *pes* and *pero.*

RHINOCŒLIA.—*rhc.*—The cavity or ventricle of each lateral part of the *rhinencephalon*, and connected with the procœlia.

RIMA (cerebri). *r.* The interruption of nervous tissue between the *fimbria* and the *tænia*, by which the fold of *pia*—still covered by the *endyma*—enters the *procœlia* to form the *proplexus.*

It extends from the dorsal border of the corresponding *porta* to near the tip of the *medicornu.* In a general way it coincides with a lateral half of the "fissure of Bichat," or "great transverse fissure." That, in the cat, the borders of this *rima* are closely united by the intruded *pia*, and that the *thalamus* is *wholly excluded from the procœlia*, was demonstrated by me on the 25th of November, 187-, in the presence of my assistant, Prof. S. H. Gage, who recorded it at the time. It was affirmed in my lectures on Physiology at the Medical School of Maine in the Spring of 1877, and in subsequent courses there and at Cornell University; and was one of the points made in a paper (4) read at the meeting of the Am. Assoc. Adv. of Sci. in 1879. While affirming this of the cat, I stated that the material at my disposal had not enabled me to demonstrate it upon the human brain, but there was no doubt that the same condition would be ascertained when a human brain could be prepared and examined with sufficient care with reference to that feature. In the Spring of 1880, Dr. Spitzka informed me that Hadlich had denied lately the appearance of the *thalamus* in the lateral ventricle, presumably of man. The fact is, whoever begins his studies of encephalic anatomy with the brains of the lower vertebrates will soon perceive that—excepting for some rupture of the parts—the *thalamus* can no more form a part of the floor of the "lateral ventricle" than can the *cerebellum* or any other part of the brain.

RIPA (deltæ).—*rp.*—The border of the *delta* formed by the reflection of the *endyma* upon the intruded *auliplexus.* Probably also in man.

ROSTRUM (callosi).—*rm.*—The rostrum of the *callosum ;* much shorter in the cat than in man.

SEPTUM LUCIDUM,—*spt. l.*—This term is not only compound, but based upon two misconceptions: that it

is always or even usually *translucent* in mammals, and that it forms a partition between the two *procœliæ* in the ordinary sense. A new term is desirable, which may refer to either of the two lateral halves of the septum, in connection with the *procœlia*, or the rest of the wall of the hemisphere.

SPLENIUM (callosi).—*sp* —The splenium.

STRIATUM, (corpus).—*s.*—The intraventricular, or entocœlian, portion of what is sometimes called the *corpus striatum*. The *nucleus caudatus*. The caudate lobe.

SULCUS HABENÆ.—*Sl. h.*—The slight furrow along the dorsal border of the *habena*.

SULCUS INTERCRURALIS LATERALIS.—*Sl. ic. l.*—In the cat, a distinct lateral furrow in the *area intercruralis*.

SULCUS INTERCRURALIS MESALIS.—*Sl. ic. m.*—A mesal furrow in the *area intercruralis of the cat*.

SULCUS LIMITANS.—*Sl. li.*—The furrow between the *thalamus* and *striatum*, in which lies the free border of the *fimbria* in contact with the *tænia*. The qualifying word is given in reference to the fact that this furrow is the line of separation between the entocœlian surface of the *striatum* and the ectocœlian surface of the *thalamus*. A shorter and more significant term is desirable.

SULCUS MONROI.—*Sl. Mn.*—The term is employed by Reichert, (A, 65, Taf. 11), to designate a part of the *dicœlia* of man ventrad of the *medicommissura*.

TÆNIA (semicircularis).—*tn.*—There seems to be no reason why this single word may not replace the numerous compounds by which the part is known.

TEGMENTUM.—*tg.*—The more dorsal layer of fibers of the *crus cerebri*, separated from the *crusta* by the *locus niger*.

TELA.—*tl.*—A general name for the membraneous roofs of the *dicœlia* and *metacœlia*. "*Tela vascuiosa*" is employed by Huxley, *I.*

TERMA.—*tr.*—*Lamina cinerea*. The adult *lamina terminalis*.

THALAMUS.—*th.*—*Thalamus opticus* seu *nervorum opticorum*. As has been well remarked by Spitzka (2), this single word is to be preferred upon all grounds to the compounds which have been applied to this part.

TRACTUS OPTICUS.—*tr. op.*—The optic tract.

TRAPEZIUM.—*tz.*—The *trapezium* of the *metencephalon*. Exposed in the carnivora, but in man concealed by the caudal margin of the *pons*.

TUBER CINEREUM.—*T. cn.*—The elevation just caudad of the *chiasma*, to which is attached the *hypophysis* by the *infundibulum*.

TUBERCULUM ROLANDO.—*tbl. R.* The tubercle or tuber of Rolando, Huguenin, A, 83.

VALVULA (cerebelli).—*vv.*—The valve of Vieussens.

VELUM (interpositum).—*vl.*—The ectocœlian portion of the fold of *pia*, the entocœlian free border of which forms the plexuses of the aula, portæ, and procœliæ.

VENA CHOROIDEA.—*v. ch.*—*Vena Galeni*.

VENTRIPYRAMIS.—*vpy.*—The anterior pyramid. The "prepyramid," Owen, A.

VERMIS (cerebelli).—*vm.*—The median lobe of the cerebellum. This and the other external features of the cerebellum are not here presented with any fullness.

If I venture to hope that a few of the changes proposed in this paper may escape disapprobation, and that all my readers may not be hostile critics, it is because the times have changed, and such an undertaking is now more likely to be viewed in its true light. I have endeavored simply to define more clearly the necessity for terminological improvement which has been admitted, in some cases unconsciously perhaps, by all who have, for example, substituted *ventral* for *anterior*, *ectoglutæus* for *glutæus maximus*, *hypophysis* for *pituitary gland*, *corpus callosum* for *commissura cerebri maxima*, *adrenals* for *suprarenal capsules*, and *basioccipital* for *basilar portion of the occipital bone*.

In evidence that the suggestions here made are not impracticable, it may be proper to state that most of the terms enumerated, particularly those of toponomy, have been used in the anatomical laboratory of Cornell University for from one to three years; that the freest criticism has been asked from the score or two of students working at practical anatomy and making their own descriptions under the immediate direction of Professor Gage; and that, so far from there having been any inconvenience, the wish has been expressed that a similar terminology might be adopted elsewhere.

On what may be called experimental grounds, therefore, it seems to me that, whatever may befall the particular terms here presented, as biological knowledge is more widely diffused, and the demand for it correspondingly increased, considerable changes in nomenclature must be effected unless anatomical teachers are willing to be styled professors of the art of needless mystification.

There is, however, little danger of the too rapid progress of terminological reform; for, whatever may be the general pressure of students and the public, definite innovations are rarely made without the sanction, or at least the toleration, of those who are most inconvenienced by any departures from custom.

The beginner can learn the new terms even more easily than the old, and at any rate he has nothing to forget. But the trained anatomist shrinks from an unfamiliar word as from an unworn boot; the trials of his own pupilage are but vaguely remembered; each day there seems more to be done, and less time in which to do it; nor is it to be expected that he will be attracted spontaneously toward the consideration that his own personal convenience and preferences, and even those of all his distinguished contemporaries, should be held of little moment as compared with the advantages which reform may insure to the vastly more numerous anatomical workers of the future.

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THE BASIN OF THE GULF OF MEXICO.

BY J. E. HILGARD, M. N. A. S.

A COMMUNICATION TO THE NATIONAL ACADEMY OF SCIENCES MADE NOV. 18, 1880, BY AUTHORITY OF C. P. PATTERSON, SUPT. U. S COAST AND GEODETIC SURVEY.

At the meeting of the National Academy of Sciences in New York, Nov. 18th, 1880, Mr. J. E. Hilgard presented, on the part of Hon. C. P. Patterson, Superintendent of the U. S. Coast and Geodetic Survey, a model of the Gulf of Mexico constructed from numerous soundings taken in the progress of that work. The accompanying plate is a reduced plan of the model, the full size of which is 24×32 inches, being on a horizontal scale of 1 : 2,400,000, and on a vertical scale of 1 inch : 1000 fathoms; making the proportion of horizontal to vertical scales 1 : 33. The plan shows the horizontal curves of every 500 fathoms of depth, as well as the curves of 100 and 10 fathoms. The same curves are delineated on the model, the forms of which, however, are shaped in conformity with all the detail obtained from the soundings, those inside of 100 fathoms being quite numerous, varying according to the configuration and importance of the locality, while beyond the 100 fathom line, where the work pertains rather to physical geography than to navi-