

*Description of two Species of Linnæan LACERTA, not before described, and construction of the new genus CYCLURA. By RICHARD HARLAN, M. D. Read November 30, 1824.*

*Species 1st.* This animal was brought from Turk's Island, and presented to the Museum immediately after its death. The colour of the skin is of a dirty deep brown; in general, the form of the head resembles that of the Iguana, but the scales on the top of the head and end of the snout are of much smaller size; their form being pentagonal, a series of corneous scales line the infra-orbital ridge. Neck, breast, and body, clothed with uniform fine smooth scales, of a square form, and slightly imbricate.

Skin of the inferior portion of the neck, loose, and folded transversely: *scales* upon the top of the back elevated and compressed into long, slightly recurved, flexible spines, forming a crest, or fringe, extending from the occiput to the base of the tail; this fringe is wanting where the neck moves on the body, leaving a smooth space half an inch in length, between the scapulæ; the same is to be observed at the setting on of the tail: *scales* on the thigh, smooth; those on the leg and front of the foot, bristled over with minute sharp spines pointing downwards. A series of pores,



twenty in number, line the inner part of each thigh : *tail* verticillate, circular at its base, slightly compressed at its upper part in the middle; becoming again cylindrical at the extremity, where it ceases to be verticillate; carinated above, by thick and sharp spines, pointing backwards, and terminating four inches from the end of the tail; the remaining portion being clothed only with equal elongated carinate scales; the spinous bands are twenty in number, extending rather more than two thirds around the tail, leaving a smooth surface beneath. They consist of thick oblong scales, with an elevated carina or an obtusely angular spine projecting backwards from their centre; these bands are separated from each other by a circular series of smaller scales depressed and imbricate, becoming carinate towards the extremity, generally three rows in number, becoming more numerous beneath: *claws* resemble those of the Iguana.

ANATOMY. Tongue fleshy, extensible, and partially slit, or rather indented at its apex: *teeth* resembling the Iguana's in form and mode of articulation; twenty-five in number on each side of both jaws: *palate* destitute of teeth; trachea lies exposed on the floor of the œsophagus, which is enormously large; the opening into the trachea is furnished with a complete epiglottis, in which respect it is more perfect than the Iguana, in which this organ is incomplete; os hyoides has



two cornua on each side, and a bifid one in the middle, reaching downwards to the loose skin of the throat; the intestine, a few inches above the cloaca, is dilated into a sack or pouch, with thick parietes: *urinary bladder* large, and opens with the fallopian tubes into the cloaca: *anus*, a transverse slit.

CIRCULATORY SYSTEM. I was desirous of comparing the structure of the heart with that organ in the crocodile, which is very unlike the heart of the *Turtles* to which Cuvier has compared it, (*Lec. d'Anat. Comp.*) As no correct description of the anatomical structure of the heart in the *Saurien* reptiles has ever been given to the public, I shall offer a brief outline of the organs of circulation in the "*CROCODILUS lucius*," which will serve as a type for all the LACERTA. To Mr. N. M. Hentz, the credit is due of having first detected this peculiarity of structure in the heart of the crocodile. His essay on this subject will shortly appear in the *Trans. of the Am. Phil. Soc.*

I abstract the following observations from my notes of a dissection of an alligator, which I performed for the fourth time in January, 1824.

1st, I forced air into the vena cava ascendens, which injected the right auricle and ventricle, and passed into the lungs through the pulmonary artery; into the splanchnic aorta; also into the systemic aorta through the valvular opening at



its base; the blood in both superior cavæ regurgitated.

2d, I forced air into one of the pulmonary veins, which inflated the left auricle and ventricle, passed into the systemic aorta, and the subclavian trunks which leave the super-cordal sacks, (each of the large arteries are dilated immediately on leaving the heart, and are so united as to appear externally as a single sac.)

The circulation in these animals is briefly as follows:—1st, the blood passes from the right auricle into the ventricle of the same side; in this cavity there are four openings, 1st, one leading from the auricle; 2d, one into the pulmonary artery; 3d, one into the splanchnic aorta, carrying black blood to the viscera; and 4th, one into the systemic aorta, by the valvular communication at its base, which allows the continuation of the circulation, when that through the lungs is impeded by expiration. During expiration there is still some pulmonic circulation, a small quantity of blood passing from the lungs, through the left auricle to the ventricle of the same side, from whence it has a direct passage into the systemic aorta, the valve at its base will not even permit air to pass into the right side of the heart, nor will the semilunar valves of the aorta permit regurgitation, so that the only mixture of black and red blood takes place in the systemic aorta during expiration, or collapse of the lungs. The sys-



temic and splanchnic aorta do not unite until after the viscera have been supplied with blood by the latter.

After this digression it will be very easy to comprehend the structure of the heart in the animal immediately under consideration. The heart, in fact, is similarly constructed externally : but, as this animal is terrestrial, there is no necessity for that complicated structure which exists in the crocodiles, and the ventricles communicate freely with each other. The three arteries which dilate immediately above this organ, uniting to form a complete sac, in the alligator, are indistinctly *observable*, or partially divided, in this animal ; and in which also the splanchnic and systemic aorta unite, *previous to giving off the mesenteric branches*.

DIMENSIONS.—Total length of the animal, 2 feet 4 inches ; length of the head, 3 inches ; breadth of the head, 2 inches ; length of the body, 10 inches ; length of the tail, 1 foot 3 inches.

*Species 2d.* Another species of the same genus brought from Tampico, and presented by Captain Dallas, has been living in the Philadelphia Museum for several months, and latterly in my possession. During the present month, (November) this animal has eaten nothing of its own accord, but when raw meat or fruit is placed in the mouth, he swallows it leisurely without chewing, showing most preference for the former, but always



rejecting cooked meat. During the summer he subsisted chiefly on fruit, and was never observed to drink; of late he has become considerably torpid, remaining in one position for hours, without any disposition to move unless roused, when he displays considerable activity. He is exceedingly tame, and fond of being washed with a wet sponge; has shown not the least disposition to bite, but when teased or tickled on the leg, will defend himself with his prickly tail, with which he is able to strike in every direction.

DESCRIPTION.—Colour of this species, dark green, on some parts of his back, brilliant or glistening: *head* nearly quadrangular, occipital portion swollen by the large muscles of the jaws: *scales* pentagonal, largest about the snout: *skin* beneath the throat loose, and folded transversely. I never have observed this inflated, even when the animal laboured under the greatest degree of irritation: scales on the body, square, small and imbricate, (as in the Iguana) those of the sides, arms, and thighs, as well as the legs and forearms, bristled over with minute prickly spines: the dorsal crest or fringe composed of an uninterrupted series of corneous scales, extending from the occiput to the sacral region, where the back is without spines for the space of one inch, when the prickly tail commences: *tail* beautifully verticillate, perfectly cylindrical, tapering gradually towards the extremity, about two inches of which is lost; the



spiniferous rings are about twenty-four in number, and appear to have extended the whole length of the tail; the scales which constitute the rings, are oblong, thick, and remarkably imbricate, so that a transverse section of the tail, including a spiny ring, with the two circular rows of depressed scales, would appear to be set into the ring which precedes it. The spines are longer, sharper, and more slender, than in the preceding species, and being all nearly of an equal size on the upper surface of the tail, there is no distinct carina, only there exists always one more spine than ring, intervening between the rings immediately upon the top of the tail; these spiny rings extend completely around the tail, becoming smaller, shorter, and less vertical on the lower surface: the rings are separated by two rows of smaller, depressed, and spineless scales, with the exception of those beneath, where all are furnished with spines; in the first four verticillations at the base of the tail the spines exist only on the upper surface: the claws are similar to those of the Iguana; there exists a row of glandular orifices, seven in number, on the inside of each thigh: *teeth* are small, conical and pointed, a single sharp, conical tooth occupying the usual situation of the middle incisor of the upper jaw is received into a hole of the inferior maxilla: *tongue* fleshy and extensible, merely notched at the tip; *palate* destitute of teeth: *trachea* as in species 1st, furnished with an



epiglottis. Anatomy, nearly similar to species 1st, the three arteries which form the supercordal sac are merely united above the heart: *omentum* loaded with fat.

**DIMENSIONS.** Total length of the animal, 1 foot 8 inches and a half, (allowing two inches for the lost portion of tail;) length of the head, 2 inches and a half; breadth of the head, 1 inch and a half; length of the body, 7 inches; actual length of the tail, 9 inches; (supposed length of the tail, 11 inches.)

**OBSERVATIONS.** On the most accurate comparison of the above described animals, with those *subgenera* to which they are most nearly allied, it appears to me, that they cannot be appropriately united with either, agreeably to the present state of the systems; for although both the individuals of which we are now treating, are unquestionably related in some traits of their organization, to the *Iguana*, the *Stellio*, and the *Agama*, yet they will be found to differ as much from either of these, as they respectively differ from each other.

The first described individual approaches the *Iguana* most nearly; the second, to the *Stellio*; they would therefore naturally occupy a station as a subgenus between the two. It is not improbable that other species may yet be discovered, and thus furnish another example of that arrangement which causes the productions of nature to succeed each other by almost imperceptible shades.



The most remarkable peculiarities common to both these individuals, being the form and structure of the tail, we propose to designate them by a term significative of this circumstance.

*Subgenus CYCLURA.*

*Generic characters.* *Palate* deprived of teeth; *tongue* fleshy and extensible, cleft at the tip; skin of the throat folded transversely; back furnished with a flexible crest or fringe: *tail*, about half the total length: *scales* which form the elevated rings, separated by two or more rows of depressed spineless scales above.

*Species 1st, C. carinata.* Pl. xv. Crowns of the teeth dentated; a row of corneous scales lines the infraorbiter ridge; dorsal crest wanting between the scapula, and also over the sacrum; scales of the body uniform, square, small, slightly imbricate and spineless: leg and foot furnished with scales, having minute spines pointing downwards: *tail* carinated above and slightly compressed in the middle; spiny bands terminating four inches from the extremity, and separated from each other by three rows of depressed scales.

*Species 2d, C. teres,* Pl. xvi. *Teeth* small, uniform and pointed; dorsal crest wanting only over the sacrum; scales on the sides, thighs and legs, bristled over with minute spines: *tail* cylindrical, tapering gradually towards the point; spiny rings encircle



the tail, separated by two rows of depressed scales without spines above ; spines on the rings nearly equal, extending to the end of the tail.

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*Observations on the Nomenclature of WILSON'S ORNITHOLOGY. By CHARLES BONAPARTE. Read November 23, 1824.*

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PIPRA.

It is not a little remarkable that Wilson should have introduced this genus in his Ornithology. The bird he placed in it has certainly no relation to the Mannakins, nor has any one of that genus been found within the United States.

168. *P. Polyglotta*. Vol. i. p. 90. This bird has been placed by authors in half a dozen different genera. It was arranged in *MUSCICAPA* by Gmelin, Latham, and Pennant ; in *TURDUS*, by Brisson and Buffon ; in *AMPELIS*, by Sparrman, and in *TANAGRA*, by Desmarest. I was at first inclined to consider it a *VIREO*, and to adopt the genus *ICTERIA* of Vieillot, as a subgenus of *VIREO*, but after having dwelt more upon the characters and habits of this remarkable species, I have concluded to adopt