EXPERIMENT XXXI.

[May 4, 1885. Terrapin, 1,640 grms. Brain and spinal cord destroyed. Heart exposed. Inflow canulas in left superior and inferior venæ cavæ. Outflow canulas in right aorta and pulmon. artery. Calf's blood and Ringer's saline (1 : 1). Venous pressure, 5 c. m. Arterial pressure, 25 c. m.]

Time p. m.	Temperature.	Rate per minute.	Work (in cubic centimeters) per minute.	Time p. m.	Temperature.	Rate per minute.	Work (in cubic centimeters) per minute.
h. m.	°*C.*			*h. m.*	°*C.*		
2 00*	.....	.....	.....	44	13	15	52
30	20	29	70	47	16	20	57
40	20	29	69	50	18	31	72
50	20	29	69	54	20	32	74
57	20	29	70	4 01	14	20	52
3 00	18	27	62	05	13	16	52
02	14	17	55	07	12	15	52
06	20	34	75	11	13	15	55
10	12	12	50	14	19	31	67
15	20	33	70	25	18	26	57
18	17	26	51	4 27	10.5	11	40
21	11	15	50	30	9	10	41
25	16	24	57	33	11	12	50
28	20	34	70	35	12	14	55
37	15.5	21	55	39	18	28	65
39	15	18	50	Experiment discontinued.			
42	13	16	50				

* Terrapin in box.

NOTE.—Every sudden change in the temperature of the circulating fluid admitted into the heart from low to high causes an immediate systolic ventricular standstill, lasting about 30 seconds, the auricles in the mean time becoming distended until from 3 to 4 times their normal size.

EXPLANATION OF PLATES.

Plate XVI is a graphic representation of Experiment XXXI.

Plate XV represents the different tracings attained under the various temperatures, from the same experiment, the long tonic ventricular systoles under the influence of the lower temperatures contrasting very remarkably with the quick energetic stroke of the ventricle under the influence of the higher temperatures.

DESCRIPTION OF A NEW SPECIES OF PEMPHERIS (PEMPHERIS POEYI) FROM CUBA.

By **TARLETON H. BEAN,**

Curator of the Department of Fishes, U. S. National Museum.

The United States National Museum possesses Professor Poey's type of *Pempheris mülleri*, and in the same bottle with it I have recently discovered a smaller specimen of a *Pempheris*, which is distinct from the type of Poey's description and appears to represent a species which is different from all of those hitherto described, so far as I am aware.

The type of the present description has received a new catalogue number, 37184. The length of the typical specimen to the base of the caudal is 46 millimeters. The species may be at once distinguished from *P. mülleri* by (1) the much larger scales on the sides, (2) its smaller eye, and (3) the much smaller number of rays in its anal fin.

The middle of the back is not so much elevated as in *P. mülleri.*

The length of the head is slightly more than one-third of the total without caudal. The eye is twice as long as the snout, and about two-fifths as long as the head. The maxilla is about one-half as long as the head and its posterior extremity is very much widened. The mandible is slightly longer than the maxilla, its length being nearly one-half the greatest height of the body. The width of the interorbital space equals one-half the length of the maxilla. The greatest height of the body equals two-fifths of the total length to caudal base. The least height of the tail equals the width of the interorbital area. The origin of the dorsal is slightly behind the vertical through the origin of the ventral, the distance from tip of snout to the origin of the dorsal being not much more than the length of the anal base. The longest dorsal ray slightly exceeds one-half the length of the head. The length of the dorsal base equals the length of the mandible. The origin of the dorsal fin is considerably in advance of the middle of the total length. The origin of the anal fin is directly under the end of the dorsal. The length of the anal base equals the greatest height of the body, and is not much in excess of the length of the head. The origin of the ventral is almost directly under that of the dorsal. The third ray of the ventral is as long as the eye. The pectoral is one-fourth as long as the total without caudal. The caudal fin is too imperfect to be described.

D. IV, 8; A. III, 24; V. I, 5; Sc. 2–56–12.

This species is dedicated to the distinguished Cuban naturalist, Prof. Félipe Poey.

NOTES ON EPINEPHELUS NIGRITUS, CAULOLATILUS MICROPS, AND CORYPHÆNA HIPPURUS.

By TARLETON H. BEAN,

Curator of the Department of Fishes, U. S. National Museum.

The United States Fish Commission steamer Albatross has recently returned from a cruise off the mouth of Chesapeake Bay, bringing to the Museum additional collections of desiderata, among them numerous species of fishes.

Two of the species taken on hand-lines and brought in fresh are referred to in the following paper. One of these is a smallish example of the black grouper, *Epinephelus nigritus*, which weighed 32 pounds after evisceration. Because of the comparative rarity of small specimens of this grouper, and also because of the doubt recently expressed by my friend, Professor Jordan, concerning the distinctness of *nigritus* from *morio*, the arrival of a fine young example from a region which is rather outside of its customary range is both interesting and opportune. After studying the Albatross specimen I am strengthened in my opinion that *nigritus* and *morio* are by no means identical, if, indeed, they may even be considered as closely related.