Mediterranean and the North Sea, upper Germany not excepted. This fact incontestably proves that these birds cross this distance in one uninterrupted flight, and during one short spring night, viz, in 9 to 10 hours, which gives a rate of locomotion of 40 geographical miles per hour. Wonderful, incomprehensible, I admit, but still remaining a fact. The slow clumsy Royston Crow (Corvus cornix) crosses from here due west\* over to England, at a rate of 27 geographical miles an hour, and results of 25 miles have been furnished by the semi-domesticated Carrier-pigeon. The distance from the north of Africa to Heligoland is equivalent to that from Newfoundland to Iceland, and therefore no objection whatever can be raised against your birds crossing over to us direct.

All this with plenty of evidence, and a great many points besides, is ready in manuscript sufficient to cover from fifty to sixty pages octavo print, and by the end of May I shall be ready for the press altogether.

I greatly count on your lenience, my dear sir, whilst allowing my pen to run on at such an unpardonable length, but perceiving from your contribution that you, like myself, have studied the grand theme of the migration in nature, which is quite a different matter from all learned treatises thereon worked out by the lamp of the studio, my hobby felt so comfortable in your genial company that it bolted off with this unresisting tide.

Begging once more to pardon my having ventured on your time and patience at such unpardonable length, in more or less objectionable English thereto,

I remain, dear sir, yours, very truly,

H. GÄTKE.

DESCRIPTION OF ALEPOCEPHALUS BAIRDII, A NEW SPECIES OF FISH FROM THE DEEP-SEA FAUNA OF THE WESTERN ATLANTIC.

# By G. BROWN GOODE and TARLETON H. BEAN.

The National Museum has recently received from Mr. Christian Johnson, of the schooner William Thompson of Gloucester, a single specimen of an undescribed species of *Alepocephalus* taken on the Grand Banks, at a depth of 200 fathoms. The only other known representative of this genus is the *Alepocephalus rostratus* Risso, a member of the

<sup>\*</sup>During the fall this line of migration, so far as it comes under observation here, day or night, is from due east to west, sometimes perhaps with the declination of a point to the south.

Mediterranean fauna. The species is dedicated to the distinguished Secretary of the Smithsonian Institution.

DIAGNOSIS.—Body comparatively elongate, somewhat compressed, its greatest height, at a point midway between pectorals and ventral insertions, contained  $5\frac{1}{3}$  times in its length to the origin of the middle caudal rays, its greatest width equal to one-tenth of total length, the least height of tail contained 11 times in length of body.

Scales large, thin, oblong, triangular at the free end, those at the base of the anal fin having the free end more produced than the others. Sixty-five scales in the lateral line, seven rows between it and the origin of the dorsal, eleven between that of the anal and the lateral line. Scales extend for a short distance upon the bases of the dorsal and anal fins.

Head moderately compressed, snout subconical, the lower jaw included within the upper when the mouth is closed. The length of the head is contained  $4\frac{1}{3}$  times in length of body, slightly exceeding twice the length of the lower jaw. Width of the head equal to the length of the operculum and very slightly less than that of the upper jaw. Width of interorbital area half of the least height of tail. Length of snout half that of the mandible, which is one-ninth of the total length. Diameter of orbit equal to length of snout.

Dorsal inserted directly above the vent, slightly in advance of the anal and at a distance from the snout nearly equal to two-thirds of the total length of the body.

Length of longest ray of dorsal one-half that of the postorbital portion of the head. The distance of the anal from the snout is almost three times the length of the head, its first ray being about under the fourth ray of the dorsal. Its length of base is greater than that of the dorsal by one-fifth of the length of the latter; its longest ray slightly exceeds the longest of the dorsal.

Middle caudal rays equal in length to longest ray of anal, the external rays somewhat more than twice as long.

Distance of pectoral from snout three times as great as the least height of the tail; its length one-tenth of total length and equal to width of body, reaching to ninth row of scales.

Distance of ventral from snout equal to twice the length of the head, its length slightly greater than that of middle caudal rays.

Radial formula: B. VI. D. 22. A. 25. C. 19. P. 12. V. 1, 9. Cæc. Pyl. 15.

Teeth on the intermaxillaries, mandible, and palatines.

Color.—Uniform indigo-blue, this color extending to the inside of the mouth and the gill-membranes.

Table of Measurements.

Length tô origin of middle caudal rays   610   50dy	Current number of specimen		22,468.	
Body: Greatest height Greatest width. Height at ventrals Least height of tall Head: Greatest length Greatest width. Width of interorbital area Length of snout Length of operculum Length of operculum Length of mandible Distance from snout to orbit Diameter of eye. Dorsal (spinous): Distance from snout. Length of base Length of longest ray. Anal: Distance from snout Length of longest ray. Anal: Length of longest ray. Length of longest ray.  Length of longest ray.  Length of longest ray.  Length of longest ray.  Length of sase Length of longest ray.  Length of sceternal rays Pectoral: Distance from snout Length. Ventral: Distance from snout Length Length Pectoral Ventral: Distance from snout Length Stranchiostegals Ventral Ventral: Dorsal 22 Anal 25 Caudal 19 Pectoral Ventral Number of scales in lateral line Number of transverse rows above lateral line Number of transverse rows above lateral line Number of transverse rows above lateral line from origin of ventral		****	100ths of length.	
Body: Greatest height Greatest width. Height at ventrals Least height of tail  Head: Greatest length Greatest width. Width of interorbital area Length of snout Length of operculum Length of upper jaw Length of mandible Distance from snout to orbit Diameter of eye. Dorsal (spinous): Distance from snout. Length of base Length of longest ray.  Anal: Distance from snout Length of longest ray.  Anal: Length of longest ray.  Length of steernal rays.  Pectoral: Distance from snout Length. Ventral: Distance from snout Length. Ventral: Distance from snout Length Length Ventral: Distance from snout Length Length Ventral: Distance from snout Length Orsal 22 Anal 62 Anal 625 Anal 625 Anal 636 Anumber of transverse rows above lateral line Number of transverse rows above lateral line Number of transverse rows above lateral line from origin of ventral 11	- that origin of middle condel rays	610		
Greatest width   Height at ventrals   Least height of tail		a limited	10	
Height at ventrals   Least height of tail	Greatest height		19 10	
Least height of tail   Head:   Greatest length   Greatest width   Width of interorbital area   Length of snout   Length of operculum   Length of operculum   Length of upper jaw   Length of mandible   Distance from snout to orbit   Diameter of eye   Dorsal (spinous):   Distance from snout   Length of base   Length of longest ray   Anal:   Distance from snout   Length of longest ray   Anal:   Length of longest ray   Caudal:   Length of longest ray   Length of longest ray   Caudal:   Length of middle rays   Length of external rays   Length of external rays   Distance from snout   Length   Distance from snout   Distance from sno	Greatest width		181	
Head:   Greatest length   Greatest width   Width of interorbital area   Length of sonout     Length of operculum   Length of upper jaw   Length of mandible     Distance from snout to orbit   Diameter of eye     Dorsal (spinous):   Distance from snout     Length of base   Length of longest ray     Anal:   Distance from snout     Length of longest ray   Caudal:     Length of longest ray   Length of longest ray     Caudal:   Length of width of the companiest	Height at ventrals		9	
Greatest length   Greatest width   Width of interorbital area   Length of snout   Length of operculum   Length of upper jaw   Length of mandible   Distance from snout to orbit   Diameter of eye.   Dorsal (spinous):   Distance from snout   Length of base   Length of base   Length of longest ray   Anal:   Distance from snout   Length of base   Length of longest ray   Candal:   Length of longest ray   Candal:   Length of middle rays   Length of external rays   Length of external rays   Pectoral:   Distance from snout   Length   Distance from snout   Distance from				
Greatest width   Width of interorbital area   Length of shout   Length of operculum   Length of operculum   Length of upper jaw   Length of mandible   Distance from shout to orbit   Diameter of eye   Dorsal (spinous):	tead:		231	
Width of interorbital area   Length of snout   Length of operculum   Length of upper jaw   Length of upper jaw   Length of mandible   Distance from snout to orbit   Distance from snout   Distance from snout   Length of base   Length of base   Length of base   Length of base   Length of longest ray   Manal:   Distance from snout   Length of base   Length of longest ray   Caudal:   Length of middle rays   Length of external rays   Length of external rays   Pectoral:   Distance from snout   Length   Len	Createst width		81	
Length of operculum   Length of upper jaw   Length of mandible	Width of interorbital area		43	
Length of upper jaw   Length of upper jaw   Length of mandible   Distance from snout to orbit   Diameter of eye   Dorsal (spinous):   Distance from snout   Length of base   Length of longest ray   Length of longest ray   Length of longest ray   Length of longest ray   Caudal:   Length of longest ray   Length of longest ray   Length of external rays   Length of external rays   Length of external rays   Length of external rays   Length   Le	Togeth of apout		5	
Length of upper jaw   Length of mandible   Distance from snout to orbit   Diameter of eye   Dorsal (spinous):   Distance from snout   Length of base   Length of longest ray   Anal:   Distance from snout   Length of longest ray   Caudal:   Length of longest ray   Caudal:   Length of middle rays   Length of external rays   Length of external rays   Pectoral:   Distance from snout   Length   Ventral:   Distance from snout   Length   Ventral:   Distance from snout   Length   Ventral:   Distance from snout   Length   Length   VI   Dorsal   22   Anal   25   Anal   25   Anal   25   Anal   25   Anal   25   Anal   26   Anal   27   Anal   27   Anal   28   Anal   29   Anal   20   Anal   20	I on with of one roulum		81	
Length of mandible   Distance from snout to orbit   Diameter of eye   Dorsal (spinous):   Distance from snout   Length of base   Length of longest ray	T - th of monon jour		8	
Distance from shout to orbit	Length of mandible		11 54	
Dorsal (spinous):   Distance from snout.   Length of base.   Length of longest ray.     Distance from snout   Length of base.   Length of longest ray.     Length of longest ray.   Caudal:   Length of middle rays   Length of external rays.	Distance from spout to orbit		5	
Distance from snout   Length of base   Length of longest ray	Diameter of eye		0;	
Length of base   Length of longest ray   Anal:   Distance from snout   Length of base   Length of longest ray   Caudal:   Length of middle rays   Length of external rays   Pectoral:   Distance from snout   Length   Le	Oorsal (spinous):		65	
Length of longest ray.   Anal:   Distance from snout   Length of base   Length of longest ray.   Caudal:   Length of middle rays   Length of external rays.   Pectoral:   Distance from snout   Length   Ventral:   Distance from snout   Length   VI   Distance from snout   Length   Distance from snout   Length   Dorsal   22   Dorsal   23   Dorsal   24   Dorsal   25   Dorsal   26   Dorsal   27   Dorsal   28   Dorsal   29   Dorsal   29   Dorsal   20   Dorsal   20   Dorsal   20   Dorsal   21   Dorsal   22   Dorsal   23   Dorsal   24   Dorsal   25   Dorsal   26   Dorsal   Dor	Distance from shout.		15	
Distance from snout   Length of base   Length of longest ray   Caudal     Length of middle rays   Length of external rays   Pectoral     Distance from snout   Length     Ut   Length	Length of bases ray		6	
Distance from snout   Length of base   Length of longest ray	nal.			
Length of longest ray   Caudal:   Length of middle rays   Length of external rays	Distance from spout		68	
Length of longest ray   Caudal     Length of middle rays     Length of external rays     Pectoral     Distance from snout     Length     Ventral     Distance from snout     Length     Branchiostegals     Dorsal     Caudal     Pectoral     Ventral     Ventral     Number of scales in lateral line     Number of transverse rows above lateral line from origin of ventral     Number of transverse rows below lateral line from origin of ventral     11     11     12     13     14     15     16     17     17     18     19     10     10     11     11     11     12     13     14     15     16     17     17     18     19     10     10     11     11     11     12     13     14     15     16     17     17     18     19     10     10     11     11     11     12     13     14     15     16     17     17     18     18     19     10     10     11     11     11     12     12     13     14     15     16     17     17     17     18     18     19     10     10     10     11     11     11     12     12     13     14     15     15     16     17     17     17     18     18     19     10     10     10     10     11	Longth of base		18:	
Caudal:         Length of middle rays           Length of external rays.         Pectoral:           Distance from snout         Length           Ventral:         Distance from snout.           Length         VI           Branchiostegals         22           Anal         25           Caudal         19           Pectoral         12           Ventral         1,9           Number of scales in lateral line         65           Number of transverse rows above lateral line from origin of ventral         11	Length of longest ray		6	
Length of external rays   Pectoral	landal.	1	0	
Length of external rays   Pectoral	Length of middle rays		6	
Distance from snout   Length   Ventral :   Distance from snout   Length   VI   Distance from snout   Length   VI   Dorsal   22   25   25   25   25   25   25   2	Length of external rays.		14	
Length   Ventral :   Distance from snout   Length   Stanchiostegals   VI   Dorsal   22   25   25   25   25   25   26   26	Pectoral:		27	
Ventral:         Distance from snout.           Length         VI           Branchiostegals         22           Dorsal         25           Anal         25           Caudal         19           Pectoral         12           Ventral         1,9           Number of scales in lateral line         65           Number of transverse rows above lateral line         7           Number of transverse rows above lateral line from origin of ventral         11	Distance from snout		10	
Distance from snout.   Length   VI   Branchiostegals   VI   Dorsal   22   25   25   25   26   26   27   27   27   27   27   27			10	
Length   VI   Branchiostegals   VI   Dorsal   22   25   25   25   26   26   27   27   27   27   27   27	Pistance from spout		48	
Branchiostegals         V1           Dorsal         22           Anal         25           Caudal         19           Pectoral         12           Ventral         1, 9           Number of scales in lateral line         65           Number of transverse rows above lateral line         7           Number of transverse rows below lateral line from origin of ventral         11	Longth		6	
Dorsal	Stanchingterals	. VI		
Anal       25         Caudal       19         Pectoral       12         Ventral       1,9         Number of scales in lateral line       65         Number of transverse rows above lateral line       7         Number of transverse rows below lateral line from origin of ventral       11	lorsa			
Caudal       19         Pectoral       12         Ventral       1,9         Number of scales in lateral line       65         Number of transverse rows above lateral line       7         Number of transverse rows below lateral line from origin of ventral       11	\nol	. 20		
Pectoral Ventral Number of scales in lateral line Number of transverse rows above lateral line Number of transverse rows above lateral line from origin of ventral	Sandal	. 19		
Number of scales in lateral line	Pectoral	. 12		
Number of transverse rows above lateral line	Ventral	1,9		
Number of transverse rows below lateral line from origin of ventral	Number of scales in lateral line	05		
Number of transverse rows below lateral line from origin of ventral	Number of transverse rows above lateral line	71		
	Number of transverse rows below lateral line from origin of ventral	15		
Number of caecar appendages	Number of cæcal appendages	. 10		
Vent: Distance from snout.	Vent:		65	

Washington, April 25, 1879.

# ON THE SPECIES OF ASTROSCOPUS OF THE EASTERN UNITED STATES.

## By TARLETON H. BEAN.

The family *Uranoscopidæ* of Gill has two representatives on the east coast of the United States, *Astroscopus y-græcum* (C. & V.) Gill, and *A. anoplus* (C. & V.) Brevoort. The former was described from the Caribbean Sea, and is now for the first time recorded in our waters. *A. anoplus* was founded upon young individuals sent by Professor LeConte, and the immaturity of the specimens has led to considerable confusion in the diagnoses of genera. Cuvier and Valenciennes supposed the species to be scaleless. Drs. Gill and Günther both employed this as one of the characters separating it from *Uranoscopus*, the latter in 1860\* assigning the *U. anoplos* of Cuvier and Valenciennes to his new genus,



Goode, G. Brown and Bean, Tarleton H. 1879. "Description of Alepocephalus bairdii, a new species of fish from the deep-sea fauna of the western Atlantic." *Proceedings of the United States National Museum* 2, 55–57. <a href="https://doi.org/10.5479/si.00963801.2-68.55">https://doi.org/10.5479/si.00963801.2-68.55</a>.

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