

Article XL.—TWO NEW OLIGOCENE TITANOTHERES.

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In the revision of the Oligocene titanotheres for the United States Geological Survey Monograph of this group, with the coöperation of Dr. William K. Gregory, the types of two new important species have been discovered which previously have been referred erroneously.

These are the skull referred by Marsh to *Brontotherium gigas* and a jaw referred by Cope to *Symbolodon acer*. The generic and specific reference in both cases is erroneous; the former specimen belongs to the genus *Allops* Marsh, the latter specimen to the genus *Megacerops* Leidy.

***Allops walcotti* sp. nov.**

Type Locality and Geologic Level.—“Big Badlands,” South Dakota, probably Corral Draw. Titanotherium zone, lower beds.

Type.—A nearly complete skull in the National Museum (No. 4260, skull Q). J. B. Hatcher collector.

Specific characters.—Premolars with small tetartocones; p^1-m^3 .285; incisors $\frac{2}{6}$. Horns elongate oval, no connecting crest; nasals elongate, broad; face relatively elongate. Mesaticephalic.

The type skull of this species (U. S. Nat. Mus. No. 4260), from level A, is narrow and elongate, partly owing to lateral crushing. This feature conceals its resemblance to *Allops marshi*, which is apparent in other features, namely: (1) primitive, long nasals; (2) horns primitively short and obliquely oval; (3) large lateral incisor (i_2) and small first (i_1), or median, incisor; (4) premolars accelerated, tetartocones more advanced than in *Brontops robustus* of level C.

Comparative Measurements.

	P^1-m^3	P^1-p^4	M^1-m^3	Pmx- cond.	Nasal length	Horn length	$P^4ap \times tr$	$M^3ap \times tr$
<i>Allops walcotti</i> type	285	112	169	640	105	100	35×51	60×61
<i>Menodus heloceras</i> A.M. 14576	265		170	603	132	070		
<i>Brontops brachycephalus</i> N.M. 4940	265	101	160			102	32×51	62×70
<i>Brontops brachycephalus</i> N.M. 4261	280	104e	178	580		085	33×53	68×73

Observations on the Measurements of Allops walcotti.—The type and only known specimen of this species exhibits the following comparison in measurements with skulls of *B. brachycephalus* and *Menodus* (*Titanotherium*) *heloceras*, which show that the type of *Allops walcotti* has relatively large premolars and small molars.

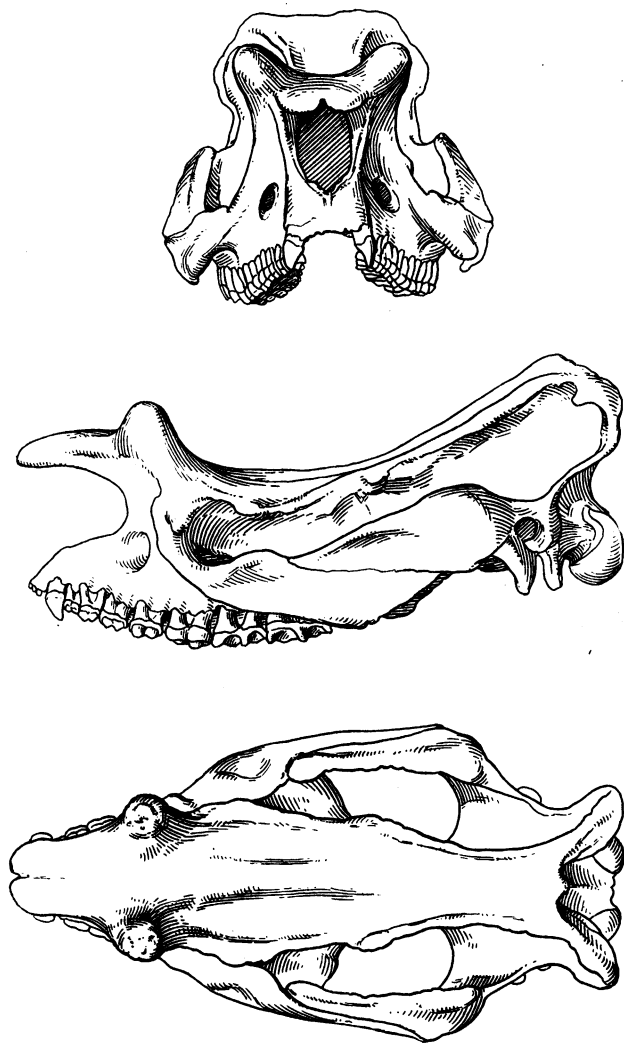


Fig. 1. Type skull of *Allops walcotti* Osborn, U. S. Nat. Mus. No. 4260. Figure copied from Plate XI entitled "*Brontotherium gigas*" of Marsh's proposed monograph on the *Brontotheriidae*. One-eighth natural size.

The skull is crushed laterally, but it probably had a low zygomatic index, that is, it was mesaticephalic. While the reference to *Allops* requires confirmation its nearer affinities appear to be with this genus rather than with *Brontops* or *Menodus*. The external cingula of the premolars are not so sharply defined as in other primitive members of the menodontine group.

The species is named in honor of the Secretary of the Smithsonian Institution, Charles D. Walcott.

***Megacerops riggsi* sp. nov.**

Type Locality and Geologic Level.—Northeastern Colorado, Horsetail Creek, 'Titanotherium' zone (?upper beds).

Type.—A nearly complete lower jaw in the American Museum, No. 6364, E. D. Cope collector.

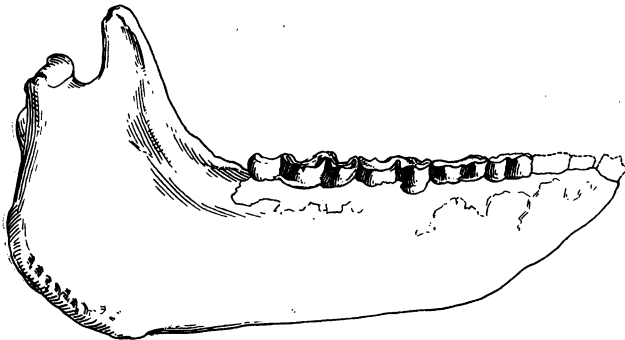


Fig. 2. Type jaw of *Megacerops riggsi* Osborn, Amer. Mus. Cope Coll. No. 6364. Jaw referred by Cope to *Symborodon acer* Cope, Pl. lxxxviii, fig. 1, of Cope's unpublished monograph "Tertiary Vertebrata, Part II." One-sixth natural size.

Specific characters.—(1) Of small size, smaller than any known individual of *Megacerops* or *Brontotherium*. (2) A very massive jaw with a small coronoid process and a very short symphysis. (3) Premolar series greatly abbreviated (.085). (4) Premolars and molars with reduced external cingula.

Measurements of Type.

Length of jaw, symphysis to condyle.....	465 (estimated)
" " premolar-molar series (p_1-m_3).....	282
" " premolar series (p_1-p_4).....	.085
" " molar series (m_1-m_3).....	194

The type of this species, named in honor of Mr. E. S. Riggs of the Field Museum of Natural History in recognition of his discoveries of Eocene titanotheres, is a jaw in the Cope Collection (Amer. Mus. Cope Coll. No. 6364) which was wrongly referred by Cope to his species "*Symborodon*" *acer*. It represents a highly specialized and small form of *Megacerops*.

