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Neocomian desmocerids from Mexico

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Introduction

When starting this study I assumed most of these desmocerids were the same age as those Late Barremian species of *Pseudohaploceras* described by BÖSE (1923) under the genus *Desmoceras*. As it turns out the specimens in the collections of the University of Texas are mostly older than Barremian. One of the reasons for this presentation is to alert paleontologists to the occurrence in Mexico of a group of ammonites heretofore undescribed from there.

Taxonomy

The specimens discussed herein are from the states of Pubela, Vera Cruz, and Colima, Mexico. They are not well preserved. Except for the questionable desmocerid from Colima, the fossils were collected around 1925 by geologists of El Aguila (La Compañía Shell de México), and any one collection may represent more than one level.

Order Ammonoidea
Suborder Ammonitina HYATT, 1900
Superfamily **Desmoceratacea** ZITTEL, 1895
Family Desmoceratidae ZITTEL, 1895
Subfamily Eodesmoceratinae WRIGHT, 1955
Genus *Eodesmoceras,* SPATH, 1923
Subgenus *Eodesmoceras,* SPATH, 1923

Eodesmoceras sp. no. 1
Pl. 1, Figs. 8-11; Pl. 2, Figs. 1-3, 6-8, 13-15

Remarks: Some specimens of *Eodesmoceras* sp. no. 1 show very faint ribbing on the mature flanks. All specimens are more evolute than either *E. celestini* (PICTET & CAMPICHE, 1858–1860) or *E. haughtoni* SPATH (1930).

However, like those two species, the more juvenile forms have a moderate H/W ratio that increases with maturity. On the other hand, in the Mexican forms the increase of the H/W occurs later in the ontogeny than in *E. celestini* or *E. haughtoni,* and the constrictions are less strongly sigmoid in the Mexican specimens. Because of this more primitive condition the forms from Mexico are probably Valanginian. *E. lechicum* (UHLIG) WRIGHT (1955) is more evolute than the Mexican forms.

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Eodesmoceras sp. no. 2
Pl. 2, Figs. 10, 12

Remarks: *Eodesmoceras* sp. no. 2 is much like E. sp. no. 1 in coiling, in early ontogeny, and in constructions. The more mature part of the specimen shows a more tabulate venter and semitrapezoidal section. The age is probably Valanginian.

Eodesmoceras sp. no. 3
Pl. 2, Figs. 11, 16

Remarks: *Eodesmoceras* sp. no. 3 has a moderately evolute coil, as have *E.* sp. no. 1 and *E.* sp. no. 2. The whorl height also increases with maturity. Constrictions are rectiradiate, and there are widely spaced, straight, slightly prosiradiate ribs that efface over the venter. Constrictions are few and cross the venter. The specimen is probably late Valanginian.

Genus *Subsaynella* SPATH, 1923
Subsaynella sp. ex. gp. *sayni* (PAQUIER, 1900)
Pl. 1, Figs. 1,4

Remarks: WSA-2654-B represents a small, only moderately ornate specimen of the genus *Subsaynella* SPATH. It is a geologically early form of the genus with rounded venter. Coiling is moderately tight but not so much as in geologically younger forms of the genus. The whorl section is nearly oval and not high as in later species or in more mature forms of *S. Sayni.* Ribbing is strongly prosiradiate as it leaves the umbilicus, arching aborad until it is rectiradiate on the outer one-fourth of the flank and crossing the venter in this manner; in this respect it is unlike that of *S. sayni.* Ribbing coarsens a little on the more mature part of the specimen. The specimen is geologically early for the genus and is probably Late Hauterivian.

Subfamily Puzosiinae SPATH, 1922
Genus *Valdedorsella* BREISTROFFER, 1947
Valdedorsella sp. ex. gp. *crassidorsata* (KARAKASCH, 1907)
Pl. 1, Figs. 2, 3, 6, 7; Pl. 2, Figs. 4, 5, 9

Remarks: This group includes specimens with moderately evolute coiling, but with height-width ratio of 1.0 or less. The large specimen, WSA-5579, has 8 constrictions on the last whorl; the two smaller specimens have 7 each. All specimens have obscure ribs crossing over the venter. Such ribbing does not appear on specimens illutrated by KARAKASCH (1907), and besides his specimens are geologically younger.

V. issarpayensis (KILIAN and REBOUL, 1915) has many more constrictions per whorl, *V. renevieri* (KARAKASCH, 1907) has more collared constrictions, and *V. soromariensis* COLLIGNON (1962) has a more depressed whorl. Whether naturally or because of corrosion the ribs do not appear on the flanks as in *Subsaynella* sp. These specimens are probably Early Hauterivian.

Desmocerid (?) sp. indet.
Pl. 1, Fig. 5.

Remarks: A small ammonite of indeterminate species and genus is moderately evolute and has sparse ribbing of about 15 ribs per volution. It is from

the state of Colima, the Salada Formation, and is the first ammonite illustrated from southwestern Mexico south of Zacatecas. I am told that other Neocomian ammonites have been collected from Colima and Jalisco.

References

BÖSE, EMIL, (1923): Algunas faunas Cretácicas de Zacatecas, Durango y Guerrero. - Instituto Geológico de México, boletín 42, 219 x IV p., 19 pls.

BREISTROFFER, M. (1947): Sur les zones d'Ammonites dans l'Albien de France et d'Angleterre. Travaux du Laboratoire de Géologie de la Faculté des Sciences de l'Université de Grenoble, v. **26**, p. 18–104.

COLLIGNON, M. (1962): Atlas des Fossiles Charactéristiques de Madagascar (ammonites), Fascicule VIII (Berriasien, Valanginien, Hauterivien, Barremien). République Malgache, Ministère d'Etat Chargé de l'Economie Nationale, Service Géologique, Tananarive, 96 p., pls. 176–214.

KARAKASCH, N. (1907): Le Crétacé inférieur de la Crimée et sa Faune. Travaux de la Société Impériale des Naturalistes de St.-Pétersbourg. v. **32**(5), 1–482, Pls. 1–28 (in Russian).

KILIAN, W. & REBOUL, P. (1915): Contribution à l'Etude des Faunes Paléocrétacées du sud-est de la France, Deuxième Partie. Sur quelques ammonites de l'Hauterivien de la Bégude (la Bégüe) [Basses-Alpes]. Mémoires pour service à explication de la Carte Géologique détailée de la France, p. 225–287, Pls. X–XV.

PAQUIER, V. (1900): Recherches géologiques dans le Diois et les Baronnies orientales. Bulletin Société Statistique, Isère 4, v, p. 77–476, appendix paléontologique, 1–viii [not seen].

PICTET, F.-J. & CAMPICHE, G. (1858–1860): Description des Fossiles du Terrain Crétacé des Environs de Sainte-Croix. Matériaux pour la Paléontologie Suisse, Seconde Série, Première partie, Genève, 380 p., 42 pls.

SPATH, L. F. (1923): A monograph of the Ammonoid of the Gault. Palaeontographical Society, vol. **75**, p. 1–72, figs. 1–14, Pls. 1–4.

SPATH, L. F. (1930): On the Cephalopoda of the Uitenhage Beds. Annals of the South African Museum, **28**:131–157.

WRIGHT, C. W. (1955): Notes on Cretaceous ammonites. – II. The Phylogeny of the Desmoceratacеae and the Hoplitaceae; The Annals and Magazine of Natural History (12 ser), no. **92**, p. 561–575.

Plate 1

Figures 1, 4: *Subsaynella* sp. ex. gp. *sayni* (PAQUIER, 1900) WSA-2654-B, left lateral and ventral views. From Chinameca Dome, some 42 kms south of Puerto, Estado de Vera Cruz, Mexico. El Aguila Collection.

Figures 2, 3, 6, 7: *Valdedorsella* sp. ex. gp. *crassidorsata* (KARAKASCH, 1907). 2, 3, WSA-5585, right lateral and ventral views. 6, 7, WSA-5576, left lateral and ventral views. All from near Teziutlan, 1850 ms [in 1925] southwest of Zaragosa, Estado de Puebla, Mexico. Collected by H. JENNY, El Aguila no. Je A-13.

Figure 5: Desmocerid (?) sp. indet. UT-51636, left lateral view. Salada Formation, 2.0 kms south of Los Ortices and about 14 kms south of the highway intersection at the southern edge of Colima, Estado Colima, Mexico, 5 kms east of highway 110 (Colima, Tecopan). Collector: Rob SLOAN, summer, 1987.

Figures 8–11: *Eodesmoceras* sp. no. 1. WSA-5580, left lateral, ventral, dorsal, and right lateral views. Locality and collection same as Pl. 1, Figs. 2, 3, 6, 7.

Bar-scale represents two centimeters.

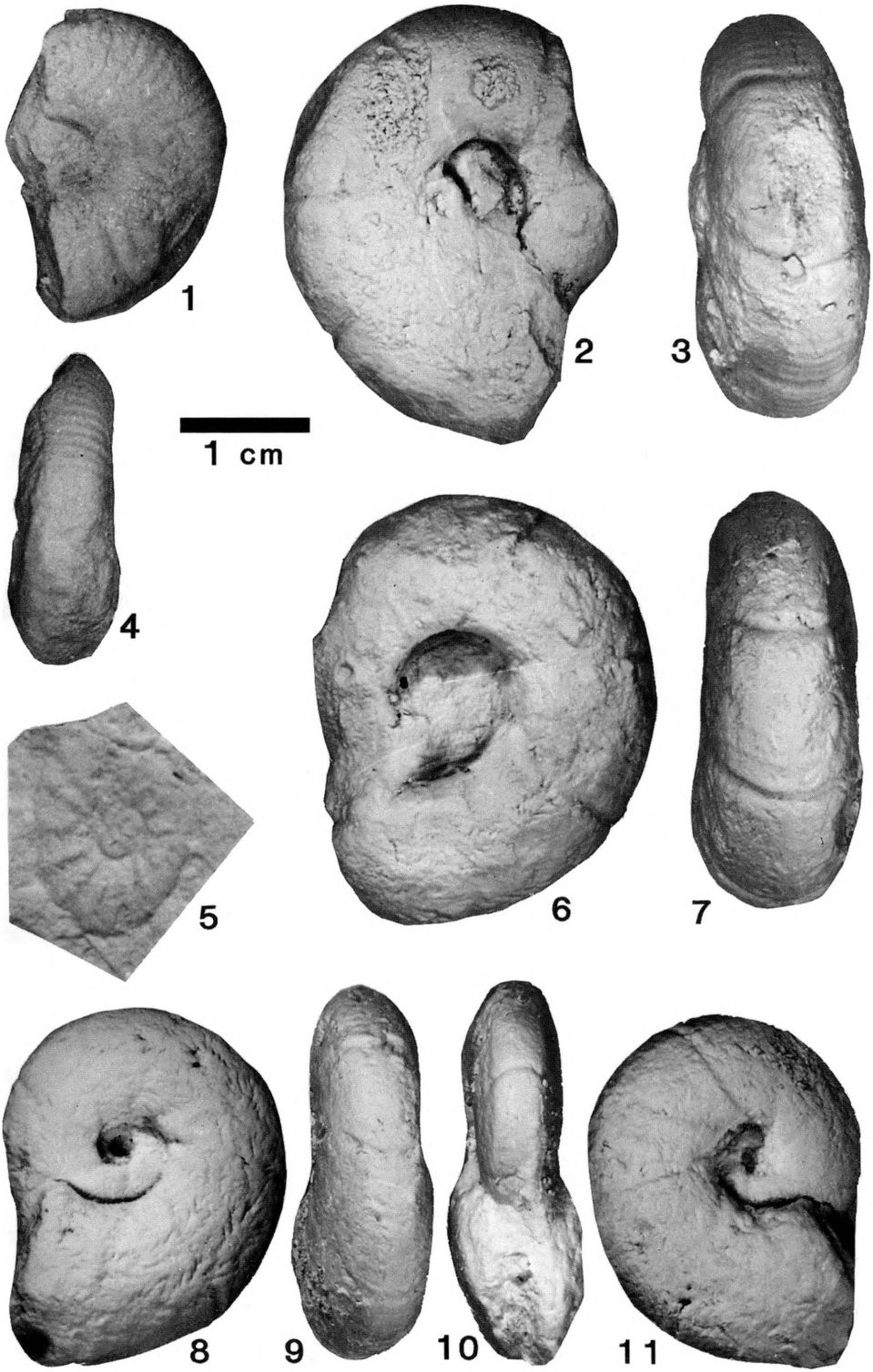
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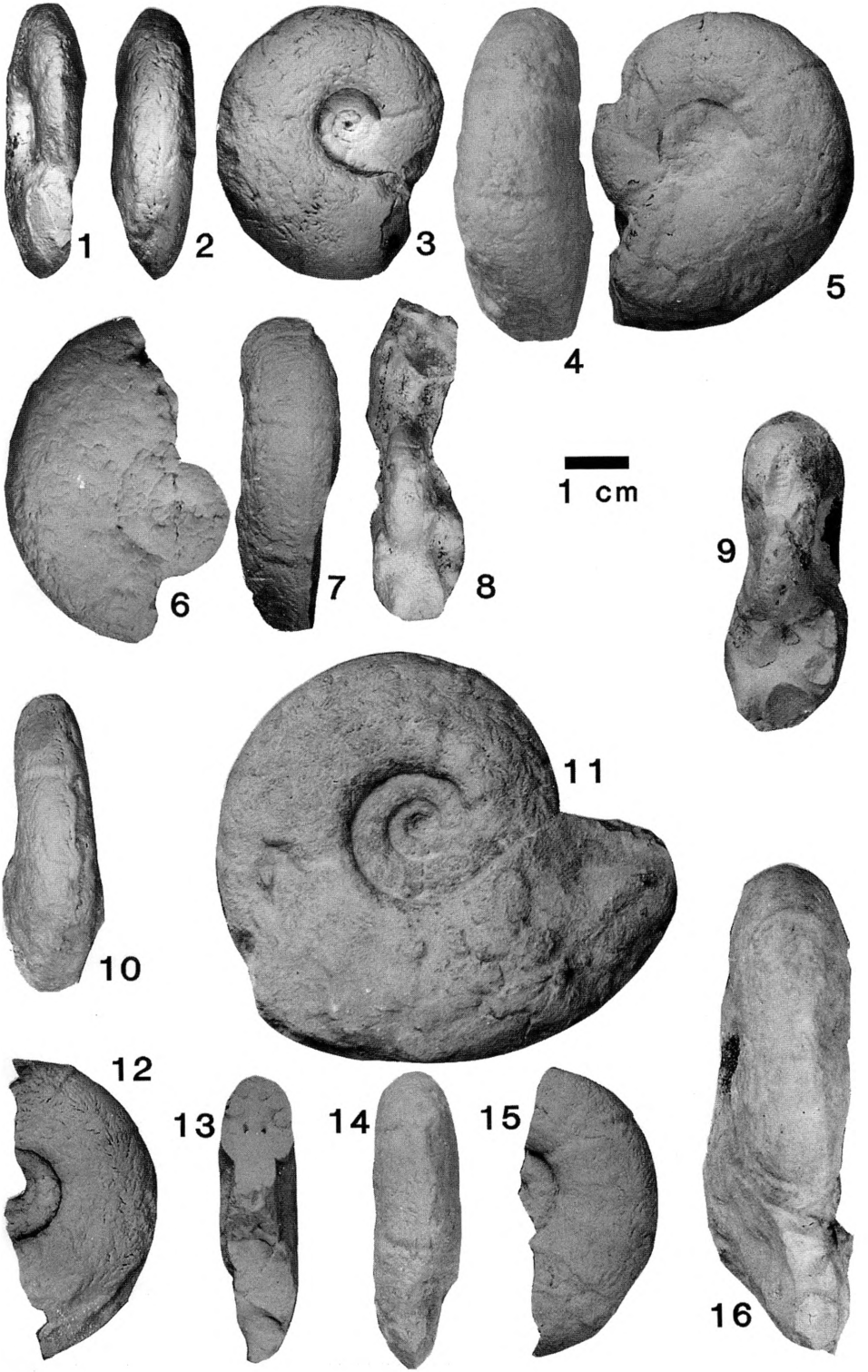
Plate 2

Figures 1–3, 6–8, 13–15: *Eodesmoceras* sp. no. 1. 1–3, WSA-5578, dorsal, ventral, and right lateral views. 6–8, WSA-5586-A, left lateral, ventral, and dorsal views. 13–15, WSA-5586-C, dorsal, ventral, and left lateral views. All from near Teziutlan, 1850 ms southwest of Zaragosa [in 1925], Estado de Puebla, Mexico. Collected by H. JENNY, El Aguila no. Je A-13.

Figures 4, 5, 9: *Valdedorsella* sp. ex gp. *crassidorsata* (KARAKASCH, 1907). WSA-5579, ventral, left lateral, and dorsal views. Same locality and collection as above.

Figures 11, 16: *Eodesmoceras* sp. no. 3. WSA-5597, right lateral and dorsal views. Same locality and collection as above.

Figures 10, 12: *Eodesmoceras* sp. no 2. WSA-5588, ventral and left lateral views. Same locality and collection as above.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