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REFERENCES

- ANDREIEFF, P. 1983: Extension stratigraphique des grands foraminifères néogènes de la région caraïbe: *Paraspiroclypeus chawneri* (Palmer) et *Operculinoides cojimarensis* (Palmer). Bull. Soc. géol. France 25, 885–889.
- ARNI, P. 1966: Contribution to the history of growth of the choroperculinoides shell. Eclogae geol. Helv. 59, 339–346.
- BAGG, R.M. 1912: see C.J. Maury 1912.
- BANNINK, D.D. 1948: Een monografie van het genus *Operculina* d'Orbigny 1826. Ph.D. thesis, Univ. Leyden, 1–159.
- BARKER, R.W. 1932a: Three species of larger foraminifera from S.W. Ecuador. Geol. Mag. 69, 277–281.
- 1932b: Larger foraminifera from the Eocene Santa Elena Peninsula, Ecuador. Geol. Mag. 69, 302–310.
- 1934: Some notes on the genus *Helicolepidina* Tobler. Paleont. 8, 344–351.
- 1938: On *Camerina petri* M.G. Rutten and *Nummulites striatoreticulata* L. Rutten. Geol. Mag. 75, 49–51.
- 1939: Species of the foraminiferal family Camerinidae in the Tertiary and Cretaceous of Mexico. Proc. U.S. natl. Mus. 86, 305–330.
- BARKER, R.W. & BLOW, W.H. 1976: Biostratigraphy of some Tertiary formations in the Tampico-Misantla Embayment, Mexico. J. foram. Res. 6, 39–58.
- BARKER, R.W. & GRIMSDALE, T.F. 1936: A contribution to the phylogeny of the orbitoidal foraminifera with descriptions of new forms from the Eocene of Mexico. J. Paleont. 10, 231–247.
- 1937: Studies of Mexican fossil foraminifera. Ann. Mag. nat. Hist. ser. 10, 19, 161–178.
- BECKMANN, J.P. 1958: Correlation of pelagic and reefal faunas from the Eocene and Paleocene of Cuba. Eclogae geol. Helv. 51, 416–422.
- 1960: Distribution of benthonic foraminifera at the Cretaceous-Tertiary boundary of Trinidad. Int. geol. Congr. Rep. 21st Sess., Norden (Copenhagen) 1960, 57–69.
- BERMUDEZ, J.P. 1950: Contribución al estudio del Cenozoico cubano. Mem. Soc. Cubano Hist. nat., Habana 19, 203–375.
- BLONDEAU, A. 1977: Les relations entre l'Amérique et l'Euro-Afrique à partir de l'étude des Ranikothalia et des Nummulites. Mem. segundo Congr. Latinamer. Geol. (Caracas 1973) 3, 1451–1460.
- BOLD, W.A. van den 1960: Eocene and Oligocene Ostracods of Trinidad. Micropaleontology 6, 145–196.
- BOLLI, H.M. 1950: The direction of coiling in the evolution of some Globorotaliidae. Contr. Cushman Found. foram. Res. 1, 82–89.
- 1957a: The genera *Globigerina* and *Globorotalia* in the Paleocene – Lower Eocene Lizard Springs Formation of Trinidad. B.W.I. Bull. U.S. natl. Mus. 215, 61–81.
- 1957b: Planktonic foraminifera from the Navet and San Fernando Formations of Trinidad. B.W.I. Bull. U.S. natl. Mus. 215, 155–172.
- 1957c: Planktonic foraminifera from the Oligo-Miocene Cipero and Lengua Formations of Trinidad. B.W.I. Bull. U.S. natl. Mus. 215, 97–123.
- 1966: Zonation of Cretaceous to Pliocene marine sediments based on planktonic foraminifera. Bol. inform. Asoc. venez. Geol. Min. Petr. 9, 3–32.
- BRÖNNIMANN, P. 1942: Eine *Proporocyclina* aus dem Eozän von Venezuela. Schweiz. Paleont. Abh. 63, 1–17.
- 1946: Zur Neudeinition von *Pliolepidina*. Eclogae geol. Helv. 39, 373–379.
- 1950: *Tremastegina*, ein neues Genus der Familie Asterigerinidae d'Orbigny. Eclogae geol. Helv. 43, 255–265.
- BRÖNNIMANN, P. & RIGASSI, D. 1963: Contribution to the geology of the area of the City of Habana, Cuba, and its surroundings. Eclogae geol. Helv. 56, 193–481.
- BUTTERLIN, J. 1956: La constitution géologique et la structure des Antilles. Edit. Paris, Centr. Nat. Res. Sci. 433.
- 1968: Données fournies par les macro-foraminifères pour l'établissement des limites de l'Oligocène dans la région des Caraïbes. Trans. 4th Carib. Geol. Conf., Trinidad & Tobago 1965, 183–188.
- 1970: Foraminíferos y edad de la Formación Punta Mosquito (Grupo Punta Carnero) de la isla de Margarita. Bol. inform. Asoc. venez. Geol. Min. Petr. 13, 273–315.
- 1971: Contribution à la connaissance du Paléogène marin du Nord-ouest de la Colombie, basée sur les macroforaminifères. Eclogae geol. Helv. 64, 13–17.
- 1976: Biostratigraphie de diverses localités du Crétacé supérieur et du Tertiaire de la région des Caraïbes, basée sur les macroforaminifères. 3rd Congr. Latinamer. Geol., Acapulco 1976 (preliminary copy).

- 1977: Problèmes concernant la répartition stratigraphique et les relations phylétiques de macroforaminifères du Paléocène de la région des Caraïbes. Mem. segundo Congr. Latinamer. Geol., Caracas 1973, 3, 1367–1379.
- 1987: Origine et évolution des Lepidocyclines de la région des Caraïbes. Comparaisons et relation avec les lepidocyclines des autres régions du Monde. Rev. Micropaleont. 29, 203–219.
- BUTTERLIN, J. & BONET, F. 1960a: Répartition stratigraphique de *Operculina catenula* Cushman & Jarvis dans le bassin des Caraïbes. Somm. séances Soc. Géol. France 1960, 1, 14.
- 1960b: Microfauna del Eocene inferior de la Peninsula de Yucatán. Univ. Nac. Aut., Mexico, Pal. Mexicana, 7, 1–18.
- CAUDRI, C.M. BRAMINE 1934: Tertiary deposits of Soemba. Ph.D. thesis, Leyden Univ., 1–224.
- 1944: The larger foraminifera from San Juan de los Morros, State of Guárico, Venezuela. Bull. amer. Paleont. 28/114, 355–404.
- 1948: Note on the stratigraphic distribution of *Lepidorbitoides*. J. Paleont. 22, 473–481.
- 1961: Some remarks on the ferruginous interval in the Eocene section of Humocaro Bajo, Lara (Venezuela). Bol. inform. Asoc. venez. Geol. Min. Petr. 4, 285–287.
- 1972a: Systematics of the American Discocyclinas. Eclogae. geol. Helv. 65, 211–219.
- 1972b: The larger foraminifera of the Scotland District of Barbados. Eclogae geol. Helv. 65, 221–234.
- 1974: The Larger Foraminifera of Punta Mosquito, Margarita Island, Venezuela. Verh. natf. Ges. Basel 84, 293–318.
- 1975: Geology and Paleontology of Soldado Rock, Trinidad (West Indies), Part 2: The larger foraminifera. Eclogae geol. Helv. 68, 533–589.
- CIZANCOURT, MARIE DE 1948: Nummulites de l'île de la Barbade. Mém. Soc. géol. France, nouv. sér. 27, Mém. 57, 1–40.
- 1951: Grands foraminifères du Paléocène, de l'Eocene inférieur et de l'Eocene moyen du Vénézuela. Mém. Soc. géol. France, nouv. sér. 30, Mém. 64, 1–68.
- CIZANCOURT, MARIE DE & CUVILLIER, J. 1954: Les Nummulites cordelées du Sénégal occidental. C.R.S. Soc. géol. France 7, 131–134.
- COLE, W.W. 1929: Three new Claiborne fossils. Bull. amer. Paleont. 15/56, 55–66.
- 1934: Oligocene Orbitoids from near Cuncan Church, Washington county, Florida. J. Paleont. 8, 21–28.
- 1938: Stratigraphy and micropaleontology of two deep wells in Florida. Bull. Florida State geol. Surv. 16, 7–73.
- 1944: Stratigraphic and micropaleontologic studies of wells in Florida, No. 3. Bull. Florida State geol. Surv. 26, 1–168.
- 1945: Stratigraphic and paleontologic studies of wells in Florida, No. 4. Bull. Florida State geol. Surv. 28, 11–160.
- 1949: Upper Eocene larger foraminifera from the Panama Canal zone. J. Paleont. 23, 267–275.
- 1952: Eocene and Oligocene larger foraminifera from the Panama Canal zone and vicinity. Prof. Pap. U.S. geol. Surv. 244, 1–41.
- 1953: Criteria for the recognition of certain assumed Camerinid genera. Bull. amer. Paleont. 35/137, 27–46.
- 1956: Jamaican larger foraminifera. Bull. amer. Paleont. 36/158, 214–233.
- 1957a: Late Oligocene larger foraminifera from Barro Colorado Island, Panama Canal zone. Bull. amer. Paleont. 37/163, 312–338.
- 1957b: Variation in American Oligocene species of *Lepidocyclus*. Bull. amer. Paleont. 38/166, 31–51.
- 1958a: Names of and variation in certain American larger foraminifera, No. 1. Bull. amer. Paleont. 38/170, 179–213.
- 1958b: Larger foraminifera from Carriacou, British West Indies. Bull. amer. paleont. 38/171, 219–233.
- 1958c: Names of and variation in certain American larger foraminifera, particularly the Cameriniids, No. 2. Bull. amer. Paleont. 38/173, 261–284.
- 1958d: Names of and variation in certain American larger foraminifera, particularly the Discocyclinids, No. 3. Bull. amer. Paleont. 38/176, 411–429.
- 1959a: Faunal associations and the stratigraphic position of certain American Paleocene and Eocene larger foraminifera. Bull. amer. Paleont. 39/182, 377–393.
- 1959b: *Asterocyclus* from a Pacific seamount, Teamotu Islands. Contr. Cushman Found. foram. Res. 10, 10–14.
- 1960a: Variability in embryonic chambers of *Lepidocyclus*. Micropaleontology 6, 133–144.
- 1960b: The genus *Camerina*. Bull. amer. Paleont. 41/190, 189–205.

- 1960c: Revision of *Helicostegina*, *Helicolepidina* and *Lepidocyclina* (*Polyepidina*). Contr. Cushman Found. foram. Res. 11, 57–63.
 - 1961a: Some nomenclatural and stratigraphical problems involving larger foraminifera. Contr. Cushman Found. foram. Res. 12, 136–147.
 - 1961b: An analysis of certain taxonomic problems in the larger foraminifera. Bull. amer. Paleont. 43/197, 372–407.
 - 1962a: Embryonic chambers and the subgenera of *Lepidocyclina*. Bull. amer. paleont. 44/200, 29–60.
 - 1962b: Periembryonic chambers in *Helicolepidina*. Contr. Cushman Found. foram. Res. 13, 145–152.
 - 1963: Illustrations of conflicting interpretations of the biology and classification of certain larger foraminifera. Bull. amer. Paleont. 46/205, 5–63.
 - 1964a: Family Discocyclinidae Galloway 1928: in Treatise of Invertebrate paleont., edit. R.C. Moore. Geol. Soc. amer. and Univ. Kansas Press, Part C, 2, 712–717.
 - 1964b: American Mid-Tertiary Miogypsinid foraminifera, classification and zonation. Contr. Cushman Found. foram. Res. 15, 138–153.
 - 1966: Additional comments on the foraminiferal genus *Camerina*. Bull. amer. paleont. 50/228, 229–263.
 - 1968: More on variation in the genus *Lepidocyclina*. Bull. amer. Paleont. 54/243, 295–325.
 - 1969a: Names of and variation in certain American larger foraminifera, particularly the Eocene Pseudophragminids. No. 4. Bull. amer. Paleont. 56/248, 4–55.
 - 1969b: Internal structure, stratigraphic range and phylogenetic relationships of certain American Eocene foraminifera. Contr. Cushman Found. foram. Res. 20, 77–86.
- COLE, W.S. & APPLIN, E.R. 1961: Stratigraphic and geographic distribution of larger foraminifera occurring in a well in Coffee County, Georgia. Contr. Cushman Found. foram. Res. 12, 127–135.
- 1964: Problems of the geographic and stratigraphic distribution of American Middle Eocene larger foraminifera. Bull. amer. Paleont. 47/212, 3–48.
- COLE, W.S. & BERMUDEZ, P.J. 1944: New foraminiferal genera from the Cuban Middle Eocene. Bull. amer. Paleont. 28/113, 3–20.
- 1947: Eocene Discocyclinidae and other foraminifera from Cuba. Bull. amer. Paleont. 31/125, 191–224.
- COLE, W.S. & GRAVELL, D.W. 1952: Middle Eocene foraminifera from Peñon Seep, Matanzas Province, Cuba. J. Paleont. 26, 708–727.
- COLE, W.S. & HERRICK, S.M. 1953: Two species of larger foraminifera from Paleocene beds in Georgia. Bull. amer. Paleont. 35/148, 49–62.
- CUSHMAN, J.A. 1917: Orbitoid foraminifera of the genus *Orthophragmina* from Georgia and Florida. Prof. Pap. U.S. geol. Surv. 108-G, 115–124.
- 1918: The larger foraminifera of the Panama Canal Zone. Bull. U.S. natl. Mus. 103, 89–102.
 - 1919: Fossil foraminifera from the West Indies. Carnegie Inst., Washington D.C. 291, 21–71.
 - 1920: The American species of *Orthophragmina* and *Lepidocyclina*. Prof. Pap. U.S. geol. Surv. 125-D, 39–108.
 - 1921: American species of *Operculina* and *Heterostegina* and their faunal relation, and a new species of *Orthophragmina* from Louisiana. Prof. Pap. U.S. geol. Surv. 128-E, 125–142.
 - 1922: Foraminifera from the Eocene deposits of Peru. In: Bosworth, T.O., Geology of the Tertiary and Quaternary periods in the northwest part of Peru, Macmillan London 1922, 136–139.
- CUSHMAN, J.A. & JARVIS, P.W. 1928: Cretaceous foraminifera from Trinidad. Contr. Cushman Lab. foram. Res. 4, 85–103.
- 1929: New foraminifera from Trinidad. Contr. Cushman Lab. foram. Res. 5, 6–17.
 - 1932: Upper Cretaceous foraminifera from Trinidad. Proc. U.S. natl. Mus. 80, 1–60.
- CUSHMAN, J.A. & RENZ, H.H. 1946: The foraminiferal fauna of the Lizard Springs Formation of Trinidad, B.W.I. Cushman Lab. foram. Res., Spec. Paper 18, 1–48.
- 1947: The foraminiferal fauna of the Sainte Croix Formation, Trinidad, B.W.I. Cushman Lab. foram. Res., Spec. publ. 22, 1–46.
 - 1948: Eocene foraminifera of the Navet and Hospital Hill formations of Trinidad, B.W.I. Cushman Lab. foram. Res., Spec. publ. 24, 1–42.
- CUSHMAN, J.A. & STAINFORTH, R.M. 1945: The foraminifera of the Cipero marl formation of Trinidad, B.W.I. Cushman Lab. foram. Res., Spec. publ. 14, 3–75.
- DAVIES, L.M. 1927: The Ranikoth beds at Thal (northwest frontier provinces of India). Quart. J. geol. Soc. London 83, 260–290.
- 1949: *Ranikothalia* in East and West Indies. Geol. Mag. 86, 113–116.

- DOUVILLÉ, H. 1915: Les orbitoïdes de l'île de la Trinité. *C.R. Acad. France* 161, 87–93.
- 1917: Les orbitoïdes de l'île de la Trinité. *C.R. Acad. France* 164, 841–847.
 - 1924: Révision des Lépidocyclines. *Mém. Soc. géol. France*, nouv. sér. 1, 1–49.
- DROOGER, W.W. 1951: Notes on some representatives of *Miogypsinella*. *Proc. (K.) nederl. Acad. Wetensch.*, ser. B, 54, 357–365.
- 1952: Study of American Miogypsinidae. Ph.D. thesis, Utrecht Univ., 1–80.
 - 1960: Some early rotalid foraminifera. *Proc. (K.) nederl. Acad. Wetensch.*, ser. B, 63, 287–334.
- EAMES, F.E., BANNER, F.T., BLOW, W.H. & CLARKE, W.J. 1962: Fundamentals of Mid-Tertiary stratigraphical correlation. Cambridge Univ. Press, 1–59.
- EAMES, F.E. & CLARKE, W.J. 1967: A Paleocene *Heterostegina*. *Palaeontology* 10, 314–316.
- EAMES, F.E., CLARKE, W.J., BANNER, F.T., SMOOT, A.H. & BLOW, W.H. 1968: Some larger foraminifera from the Tertiary of Central America. *Palaeontology* 11, 283–305.
- FROST, S.H. & LANGENHEIM JR., R.L. 1974: Cenozoic reef biofacies, Tertiary larger foraminifera and scleractinian corals from Chiapas, Mexico. Northern Illinois Univ. Press, DeKalb, Illinois, 3–388.
- GALLOWAY, J.J. 1928: Notes on the genus *Polylepidina* and a new species. *J. Paleont.* 1, 299–303.
- GEYN, W.A.E. VAN DE & VLERK, I.M. VAN DER 1935: A monograph on the Orbitoididae occurring in the Tertiary of America (compiled in connection with the examination of a collection of larger foraminifera from Trinidad). *Leidse geol. Meded.* 7, 221–272.
- GILL, W.D. 1953: Facies and fauna in the Bhadzar Beds of the Punjab Salt Range, Pakistan. *J. Paleont.* 27, 824–844.
- GLAESSNER, M.F. 1943: Problems of stratigraphic correlation in the Indo-Pacific Region. *Proc. Roy. Soc. Victoria* 55, 41.
- GORTER, NETTIE E. & VLERK, I.M. VAN DER 1932: Larger foraminifera from Falcón (Venezuela). *Leidse geol. Meded.* 4, 94–122.
- GRAVELL, D.W. 1933: Tertiary larger foraminifera of Venezuela. *Smithson. misc. Collect.* 89/11, 1–44.
- GRAVELL, D.W. & HANNA, M.A. 1937: The *Lepidocyclina texana* horizon in the *Heterostegina* zone, Upper Oligocene, of Texas and Louisiana. *J. Paleont.* 11, 517–529.
- 1938: Subsurface Tertiary zones of correlation through Mississippi, Alabama and Florida. *Bull. amer. Assoc. Petroleum Geol.* 22, 984–1013.
 - 1940: New larger foraminifera from the Claiborne of Mississippi. *J. Paleont.* 14, 412–416.
- GRIMSDALE, T.F. 1941: New species of *Helicostegina* from Soldado Rock. Appendix in VAUGHAN & COLE 1941, 86.
- 1952: Cretaceous and Tertiary foraminifera from the Middle East. *Bull. brit. Mus. nat. Hist.* 1/8, 223–247.
 - 1959: Evolution in the American Lepidocyclinidae. *Proc. (K.) nederl. Akad. Wetensch.*, ser. B, 62, 8–33.
- GRIMSDALE, T.F. & VLERK, I.M. VAN DER 1959: A review of some subgeneric nomenclature among the Lepidocyclinae. *Proc. (K.) nederl. Akad. Wetensch.*, ser. B, 62, 1–7.
- GUPPY, R.J.L. 1863: On the occurrence of foraminifera in the Tertiary beds at San Fernando, Trinidad. *Trans. Sci. Assoc. Trinidad* 1863–66, 1, 11–12.
- 1866: On the relations of the Tertiary formations of the West Indies. *Quart. J. geol. Soc. London* 22, 570–590.
 - 1892: The Tertiary microzoic formations of Trinidad. *Quart. J. geol. Soc. London* 48, 519–541.
- HANZAWA, S. 1937: Notes on some interesting Cretaceous and Tertiary foraminifera from the West Indies. *J. Paleont.* 11, 110–117.
- 1940: Micropaleontological studies of drill cores from a deep well in Kita-Daito-Zima (North Borodino Island). *Jubilee Publ. in Commem. of Prof. H. Yabe's 60th Birthday*, 755–802.
 - 1962: Upper Cretaceous and Tertiary three-layered larger foraminifera and their allied forms. *Micropaleontology* 8, 129–186.
- HANZAWA, S. & ASANO, K. 1942: Note on some Lepidocyclines from Palmalt, Tamismolon, Vera Cruz, Mexico. *J. Geol. & Geogr. Soc. Japan* 18, 119–126.
- HARRIS, G.D. 1926: Notes on the paleontology. In: Waring, G.A., The geology of the Island of Trinidad, B.W.I. Johns Hopkins Univ., Studies in Geol. 7, 87–112.
- HODSON, HELEN 1926: Foraminifera from Venezuela and Trinidad. *Bull. amer. Paleont.* 12/47, 1–46.
- HOFKER SR., J. 1927: The foraminifera of the Siboga Expedition. *Siboga Expedition, Monogr.* 4/1, 1–78.
- 1932: Une analyse du foraminifère fossile *Orthophragmina advena*. *Ann. Protistologie*, Paris, 3, 209–215.
 - 1933: Foraminifera of the Malay Archipelago. *Papers from Dr. Th. Mortensens' Pacific Exp. 1914–1916* 62, 71–167.

- 1968: Tertiary foraminifera of Coastal Ecuador. *Paleontographica* 130, 1–59.
- HOTTINGER, L. 1962: Les genres *Operculina* et *Heterostegina* et leur utilité stratigraphique. Extrait du colloque sur le paléogène (Bordeaux, Sept. 1962).
- 1973: Selected Paleogene larger foraminifera. In: *Atlas of Paleobiogeogr.*, 1973, edit. A. Hallam, Elsevier, Amsterdam, 443–452.
- HUNTER, V.F. 1974: The Mid-Tertiary stratigraphic unit of the Southern Caribbean Area. *Verh. natf. Ges. Basel* 84, 172–190.
- HUTCHISON, A.G. & TERPSTRA, G.R.J. 1939: A note upon the Biche Quarry limestone, Trinidad. *Bull. amer. Assoc. Petroleum Geol.* 23, 1242.
- JENKINS, D.G. 1964: Panama and Trinidad Oligocene rocks. *J. Paleont.* 38, 606.
- KUGLER, H.G. 1936: Summary digest of the geology of Trinidad. *Bull. amer. Assoc. Petroleum Geol.* 20, 1439–1453.
- 1953: Jurassic to Recent sedimentary environments in Trinidad. *Bull. Assoc. suisse Géol. Ing. Pétrole* 20/59, 27–60.
- 1956: Lexique stratigraphique de Trinidad, Amérique Latine. Centre natl. Rech. Sci., Paris, 41–116.
- KUGLER, H.G. & CAUDRI, C.M. BRAMINE 1975: Geology and Paleontology of Soldado Rock, Trinidad, West Indies. Part 1: Geology and Biostratigraphy. *Eclogae geol. Helv.* 68, 365–430.
- LIDDLE, R.A. 1928: The geology of Venezuela and Trinidad. edit. P.J. MacGowan, Fort Worth, 1–890.
- MAURY, C.J. 1912: A contribution to the paleontology of Trinidad. *J. Acad. Nat. Sc. Philadelphia* 15, 23–112, including R.M. Bagg's annotations.
- 1925: A further contribution to the paleontology of Trinidad (Miocene fossils). *Bull. amer. Paleont.* 10/42, 153–402.
- NAGAPPA, Y. 1959: Foraminiferal biostratigraphy of the Upper Cretaceous-Eocene succession in the India-Pakistan-Burma region. *Micropaleontology* 5, 145–192.
- NUTTALL, W.L.F. 1926: The zonal distribution of the larger foraminifera in the Eocene of Western India. *Geol. Mag.* 68, 495–504.
- 1928: Tertiary foraminifera from the Naparima Region, Trinidad, British West Indies. *Quart. J. geol. Soc. London* 84, 57–115.
- 1930: Eocene foraminifera from Mexico. *J. Paleont.* 4, 271–293.
- 1932: Lower Oligocene foraminifera from Mexico. *J. Paleont.* 6, 3–35.
- 1933: Two species of *Miogypsina* from the Oligocene of Mexico. *J. Paleont.* 7, 175–177.
- PALMER, DOROTHY K. 1934: Some large fossil foraminifera from Cuba. *Mem. Soc. Cubana Hist. natl.* 8, 235–264.
- PEIRSON, III, A.L., SALVADOR, A. & STAINFORTH, R.M. 1966: The Guárico Formation of North-Central Venezuela. *Bol. inform. Asoc. venez. Geol. Min. Petr.* 9, 183–224.
- RAADSHOOVEN, B. VAN 1951: On some Paleocene and Eocene larger foraminifera of Western Venezuela. Proc. 3rd World Petroleum Congr., sect. 1, 476–489.
- RAHAGHI, A. 1978: Paleocene biostratigraphy of parts of Iran. Nat. Iranian Oil Co., Geol. Lab., Publ. 7, 1–82.
- RENZ, H.H. 1942: Stratigraphy of northern South America, Trinidad and Barbados. Proc. 8th amer. Sci. Congr. geol. sci., Washington, 4, 513–571.
- ROBINSON, E. 1968a: Stratigraphic ranges of some larger foraminifera in Jamaica. *Transact. 4th Carib. Geol. Conf.*, Port of Spain, Trinidad 1965, 189–194.
- 1968b: Zonation by larger foraminifera of the Cretaceous and Lower Tertiary. Unpublished paper read at the 5th Carib. Geol. Conf., St. Thomas, Virgin Islands 1968. Preprint Univ. of Puerto Rico, 1968 (Abstr. only in the Transact. of the conf., 1971).
- ROBINSON, E. & JUNG, P. 1972: Stratigraphy and age of marine rocks, Carriacou, West Indies. *Bull. amer. Assoc. Petroleum Geol.* 56, 114–127.
- RUTSCH, R. 1939: Die Gattung *Tubulostium* im Eocaen der Antillen. *Eclogae geol. Helv.* 32, 231–244.
- 1943: Die Paläocän Mollusken der Inseln Trinidad und Soldado Rock (B.W.I.). *Eclogae geol. Helv.* 36, 139–192.
- RUTTEN, L. 1928: On Tertiary rocks and foraminifera from Northwestern Peru. *Proc. (K.) nederl. Akad. Wetensch.* 31, 931–946.
- RUTTEN, M.G. 1935a: Larger foraminifera of Northern Santa Clara Province, Cuba. *J. Paleont.* 9, 527–545.
- 1935b: A note on *Actinosiphon vichayalensis* (Rutten). *J. Paleont.* 9, 546–547.
- SACHS, K.N. 1957: Restudy of some Cuban larger foraminifera. *Contr. Cushman Found. foram. Res.* 8, 106–120.
- 1959: Puerto Rico Upper Oligocene larger foraminifera. *Bull. amer. Paleont.* 39/183, 399–416.

- SALVADOR, A. 1950: Stratigraphy of the Chejendé region, Venezuela. Ph.D. thesis Stanford Univ.
- SAMANTA, B.K. 1963: A new species of *Discocyclina* from the Garo Hills, Assam. Univ. Calcutta, Dept. Geol. Sci. & Cult. 29, 39–40.
- SCHENCK, H.G. 1929: *Discocyclina* in California. Trans. San Diego Soc. Nat. Hist. 5, 211–240.
- SCHENCK, H.G. & FRIZZELL, D.L. 1936: Subgeneric nomenclature in foraminifera. Amer. J. Sci. 31, 464–466.
- SEIGLIE, G.A. 1965: Cuadro preliminar sobre la distribución estratigráfica de los foraminíferos grandes de Cuba. Lagena, Inst. oceanogr., Univ. Oriente, Venezuela, 7, 23–30.
- SENN, A. 1935: Die stratigraphische Verbreitung der tertiären Orbitoiden, mit spezieller Berücksichtigung ihres Vorkommens in Nord-Venezuela und Nord-Marokko. Eclogae geol. Helv. 28, 15–113, 369–373.
- SILVESTRI, A. 1924: Fauna paleogenica di Vasciano presso Todi. Bol. Soc. geol. ital. 42, 7–29.
- 1939: Foraminiferi dell'Eocene della Somalia. Paleontografica ital. 32, suppl. 3, suppl. 4, 93.
- STAINFORTH, R.M. 1948a: Description, correlation and paleoecology of the Tertiary Cipero marl Formation, Trinidad, B.W.I. Bull. amer. Assoc. Petroleum Geol. 32, 1292–1330.
- 1948b: Applied micropaleontology in coastal Ecuador. J. Paleont. 22, 113–151.
- 1955: Ages of Tertiary formations in Northwest Peru. Bull. amer. Assoc. Petroleum Geol. 39, 2068–2077.
- STRATIGRAPHICAL LEXICON OF VENEZUELA (ENGLISH EDITION) 1956: Min. Minas e Hidrocarb. Bol. Geol. Special publ. 1, 664.
- SUTER, H.H. 1954: The general and economic geology of Trinidad (originally published in 1951–1952, reproduced and amended in 1954). Colon. geol. & min. Resour. 2/3, 177–217; 2/4, 271–307; 3/1, 3–51.
- 1960: The general and economic geology of Trinidad, second edition, with revisionary appendix by G.E. Higgins. Overseas geol. Surv. Min. Resour. Div., 1–134, appendix 135–143.
- TAN SIN HOK 1936a: Zur Kenntnis der Miogypsiniden. De Ing. in nederl.-Indië 4, Mijnb. en Geol., De Mijning, 3, 45–61.
- 1936b: Beitrag zur Kenntnis der Lepidocycliniden. Proc. (K.) nederl. Akad. Wetensch. 39, 990–999.
- 1936c: Zur Kenntnis der Lepidocycliniden. Natkd. Tijdschr. nederl.-Indië 96, 235–280.
- 1936d: *Lepidocyclina zeijlmansi* nov. spec., eine polylepidine Orbitoidide von Zentral-Borneo, nebst Bemerkungen über die verschiedenen Einteilungsweisen der Lepidocyclinen. De Ing. in nederl.-Indië, Mijnb. en Geol., De Mijning, 3, 7–14.
- 1939: On *Polylepidina*, *Orbitocyclina* and *Lepidorbitoides*. De Ing. in nederl.-Indië, Mijnb. en Geol., De Mijning, 6, 53–84.
- THALMANN, H.E. 1932: Das Vorkommen der Gattung *Miogypsina* Sacco 1893 in Ost-Mexiko. Eclogae geol. Helv. 25, 282–286.
- 1935: Liste der Foraminiferen von der Typus-Lokalität der miozänen Tuxpan-Stufe, Ciudad de Tuxpan, Veracruz, Mexiko. Eclogae geol. Helv. 28, 602–605.
- TOBLER, A. 1922a: Die Jackson-Stufe (Priabonien) in Venezuela and Trinidad. Eclogae geol. Helv. 17, 342–346.
- 1922b: *Helicolepidina*, ein neues Subgenus von *Lepidocyclina*. Eclogae geol. Helv. 17, 380–384.
- TODD, J.U. & BARKER, W.R. 1932: Tertiary Orbitoids from Northwest Peru. Geol. Mag. 69, 529–543.
- VAUGHAN, T.W. 1924: American and European Tertiary larger foraminifera. Bull. geol. Soc. Amer. 35, 785–822.
- 1926: Species of *Lepidocyclina* and *Carpenteria* from the Cayman Islands. Quart. J. geol. Soc. London 82, 388–400.
- 1927a: Larger Foraminifera of the genus *Lepidocyclina* related to *Lepidocyclina mantelli*. Proc. U.S. natl. Mus. 71, 1–5.
- 1927b: Notes on the types of *Lepidocyclina mantelli* (Morton) Gümbel and on topotypes of *Nummulites floridanus* Conrad. Proc. Acad. Sc. Philadelphia 79, 299–303.
- 1928a: New species of *Operculina* and *Discocyclina* from the Ocala limestone. Ann. Florida State geol. 19, 155–165.
- 1928b: Species of large arenaceous and orbitoidal foraminifera from the Tertiary deposits of Jamaica. J. Paleont. 1, 277–298.
- 1929a: Description of new species of foraminifera of the genus *Discocyclina* from the Eocene of Mexico. Proc. U.S. natl. Mus. 76, 1–18.
- 1929b: *Actinosiphon semmesi*, a new genus and species of orbitoidal foraminifera, and *Pseudorbitoides trechmanni* H. Douvillé. J. Paleont. 3, 163–169.
- 1929c: Species of *Orbitocyclina*, a genus of American orbitoidal foraminifera from the Upper Cretaceous of Mexico and Louisiana. J. Paleont. 3, 170–175.
- 1929d: Studies of orbitoidal foraminifera: the subgenus *Polylepidina* of *Lepidocyclina*, and *Orbitocyclina*, a new genus. Proc. Nat. Acad. of Sci. 15, 288–295.

- 1933a: Studies of American species of foraminifera of the genus *Lepidocyclina*. Smithson. misc. Coll. 89, 1–53.
- 1933b: Report on species of corals and larger foraminifera collected in Cuba by O.E. MEINZER. J. Washington Acad. Sci. 23, 252–355.
- 1936: *Helicolepidina nortoni*, a new species of foraminifera from a deep well in St. Landry Parish, Louisiana. J. Paleont. 10, 248–252.
- 1937: The Tertiary larger foraminifera of Southwest Ecuador. In: Sheppard, G., The Geology of Southwestern Ecuador, edit. Thomas Murby & Co. London, 150–175.
- 1945: American Paleocene and Eocene larger foraminifera: Part 1: Paleocene and Eocene larger foraminifera from Barbados; Part 2: Catalogue of American Discocyclinidae. Mem. geol. Soc. Amer. 9, 1–175.
- VAUGHAN, T.W. & COLE, W.S. 1936: New Tertiary foraminifera of the genus *Operculina* and *Operculinoides* from North America and the West Indies. Proc. U.S. natl. Mus. 83, 487–496.
- 1941: Preliminary report on the Cretaceous and Tertiary larger foraminifera of Trinidad, British West Indies (with an appendix on new species of *Helicostegina* from Soldado Rock by THOMAS F. GRIMSDALE). Geol. Soc. Amer. Spec. paper 30, 1–137.
- VLERK, I.M. VAN DER 1955: Correlation of the Tertiary of the Far East and Europe. Micropaleontology 1, 72–75.
- VOORTHUYSEN, J.H. VAN 1969: Holocene and Paleocene foraminifera of the boring Alliance-28 in Surinam (Dutch Guiana). Geol. en Mijnb. 48, 135–161.
- WALL, G.P. & SAWKINS, J.G. 1860: Report on the geology of Trinidad. Mem. geol. Survey, Part 1: West Indian Survey, 211.
- WARING, G.A. 1926: The geology of the Island of Trinidad, B.W.I. Johns Hopkins Univ., Studies in Geol. 7, 1–181.
- WONG, T.E. 1976: Tertiary Stratigraphy and Micropaleontology of the Guiana Basin. Meded. geol. Mijnb. Dienst, Suriname 25, 13–107.

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