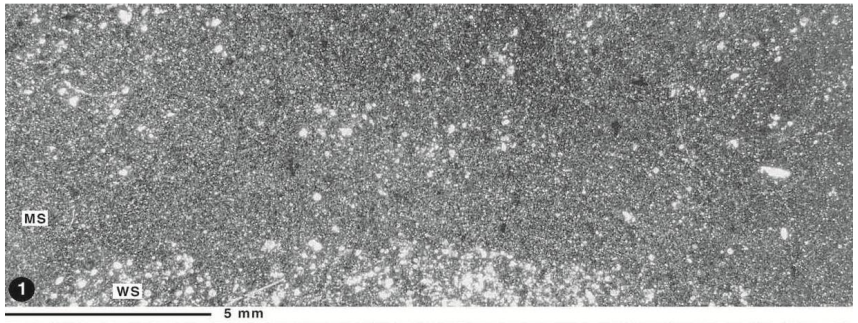
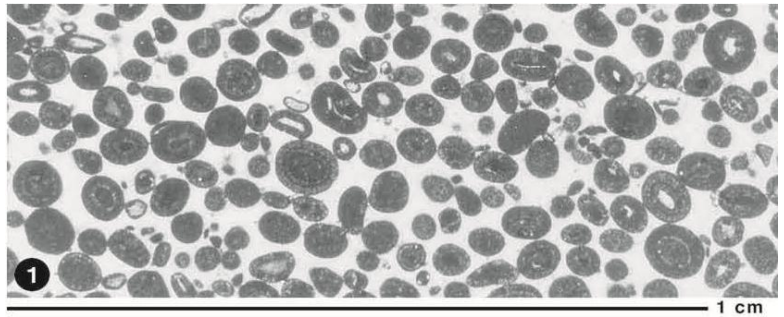
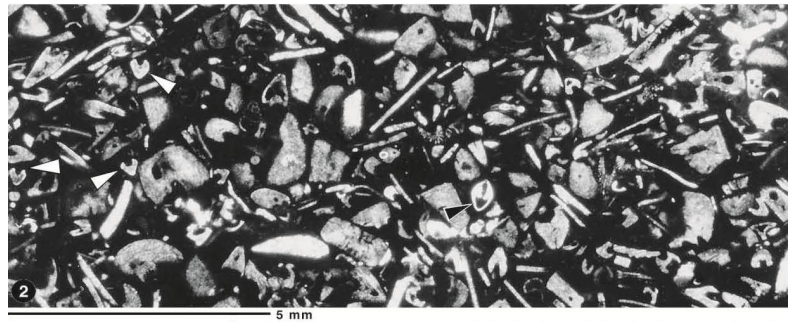
OPĆA PALEONTOLOGIJA

MIKROFACIJESI







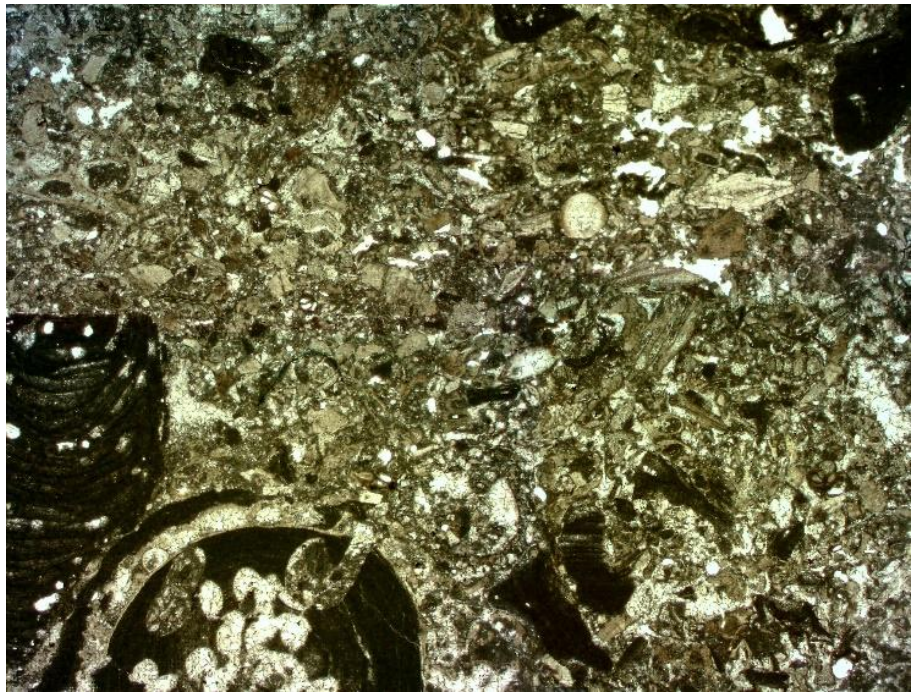
doc. dr. sc. Karmen Fio Firi
karmen.fio@geol.pmf.unizg.hr

Mikrofacijes

- Mikroskopske karakteristike stijena: veličina, vrsta i način slaganja čestica, vezivo
- Prema tipu i veličini čestica, vrsti veziva, fosilnim ostacima… može se odrediti kojoj sredini i energiji okoliša pripadaju

- Klasifikacije ovisno o tipu naslaga: klastični i karbonatni sedimenti

- Mjerilo!

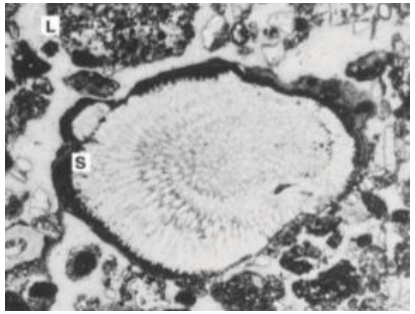


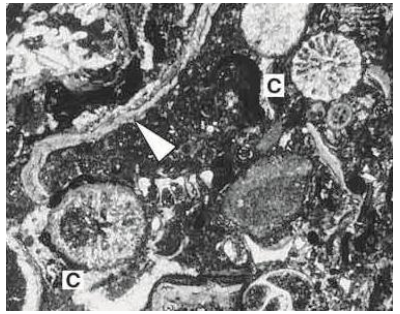
bioklastični pekston-grejnston (Martinuš et al., 2012)

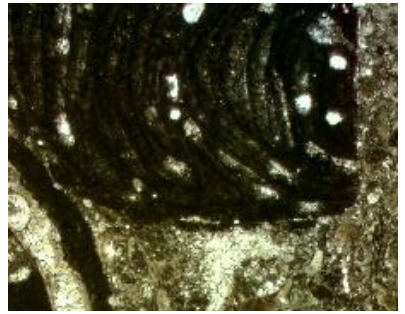
Tip zrna, klasta, čestica

- Alokemi – različite čestice, dijelimo ih najosnovnije na:
  - Skeletne – organski ostaci, dijelovi skeleta različitih organizama

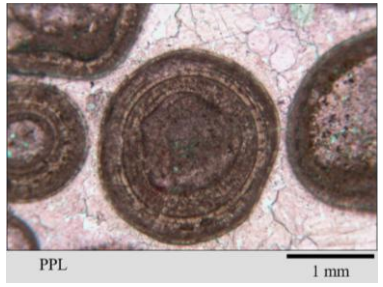


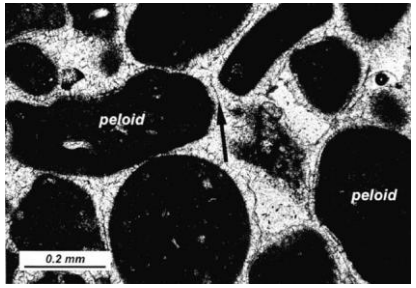


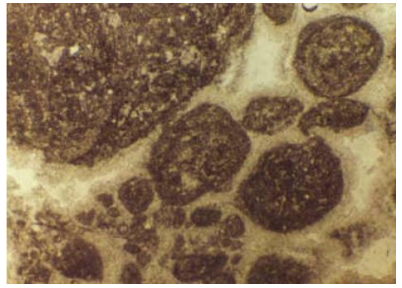
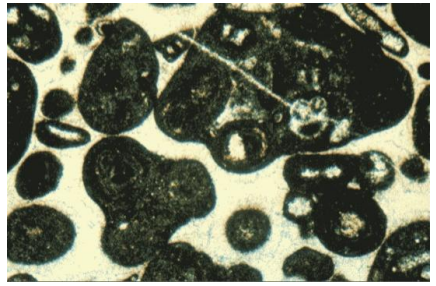




  - Ne-skeletne – anorganske, nastale kemijskom precipitacijom (ooidi, peloidi/ peleti, intraklasti, grapestone)

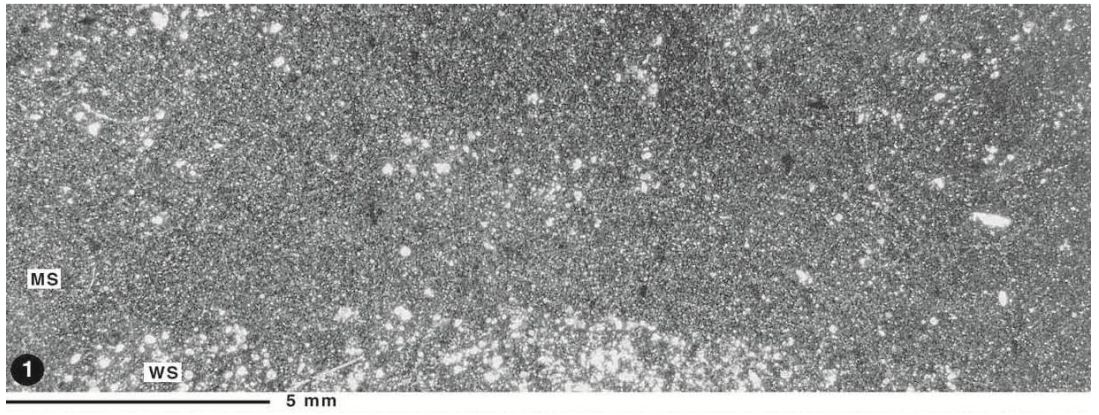




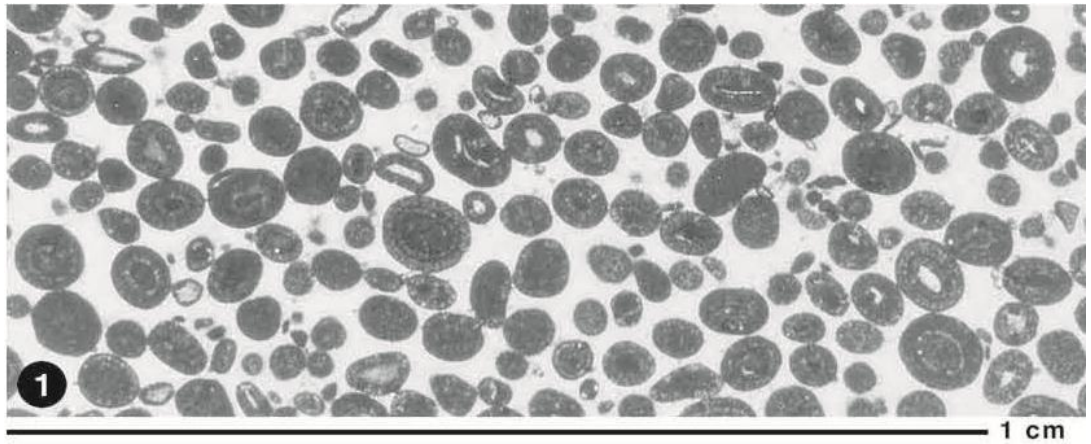



Tip veziva

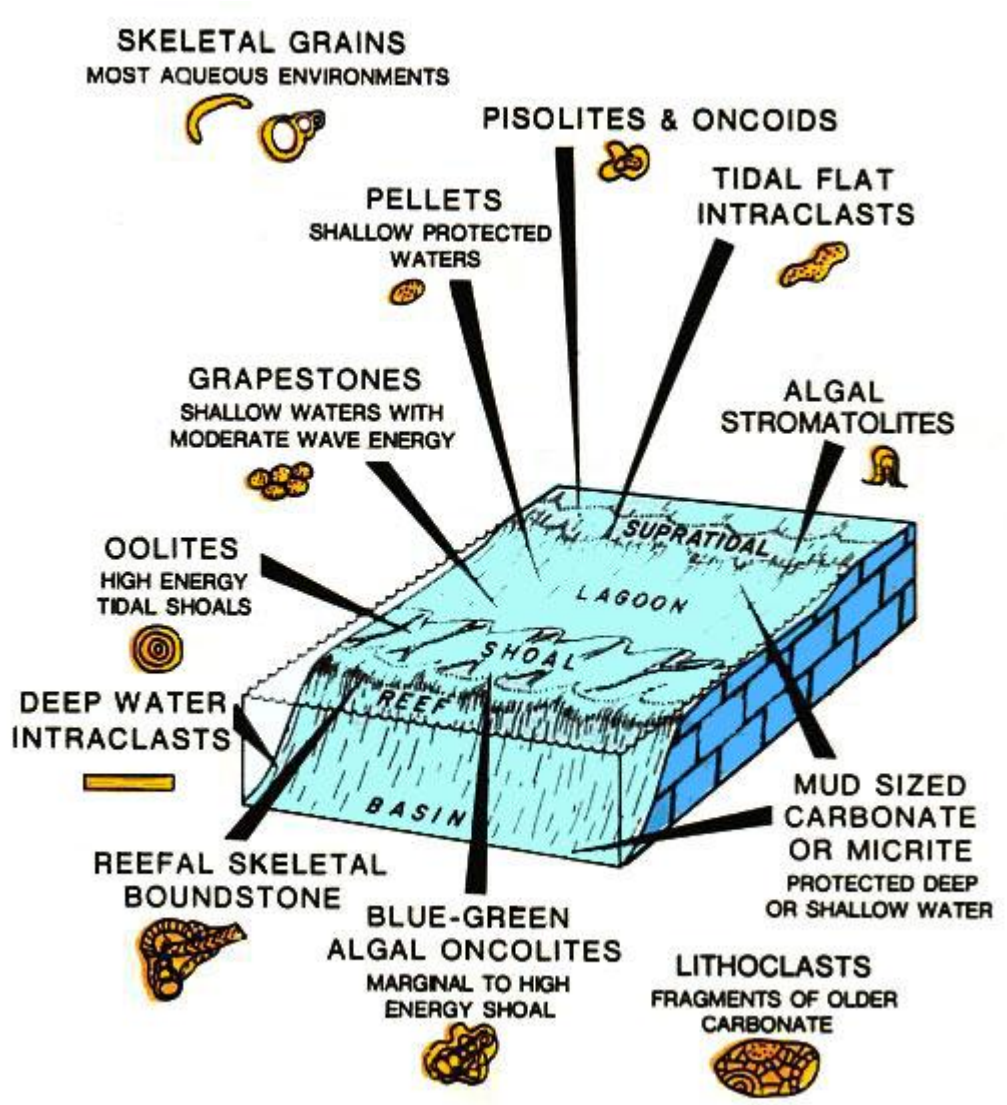
- Muljno vezivo (mikrit = mikrokristalinični kalcit = litificirani vapnenački mulj)



- Zrnato vezivo (sparit)



Određivanje taložnih okoliša temeljem prisutnih ostataka



http://www.sepmstrata.org/page.aspx?pageid=88

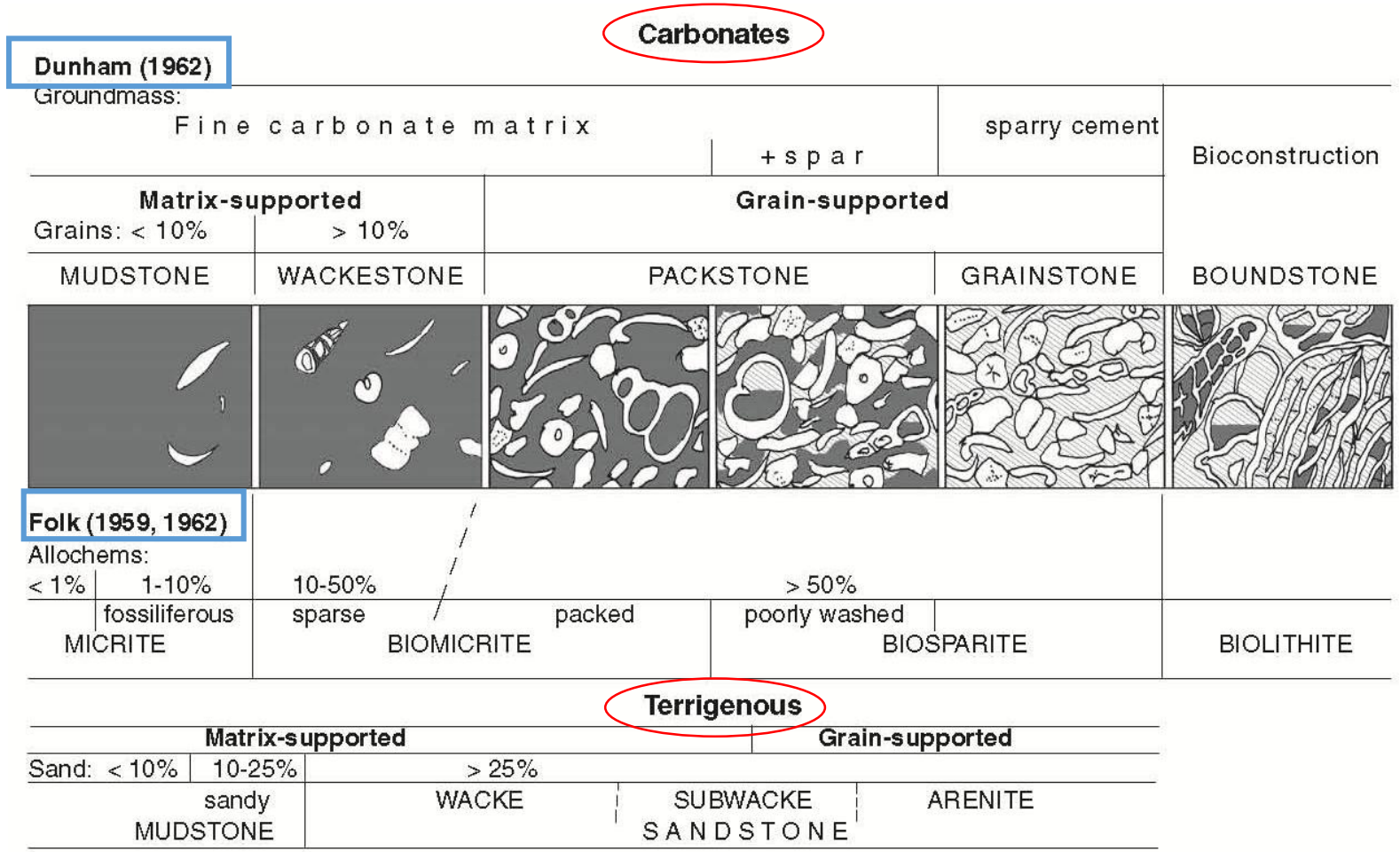
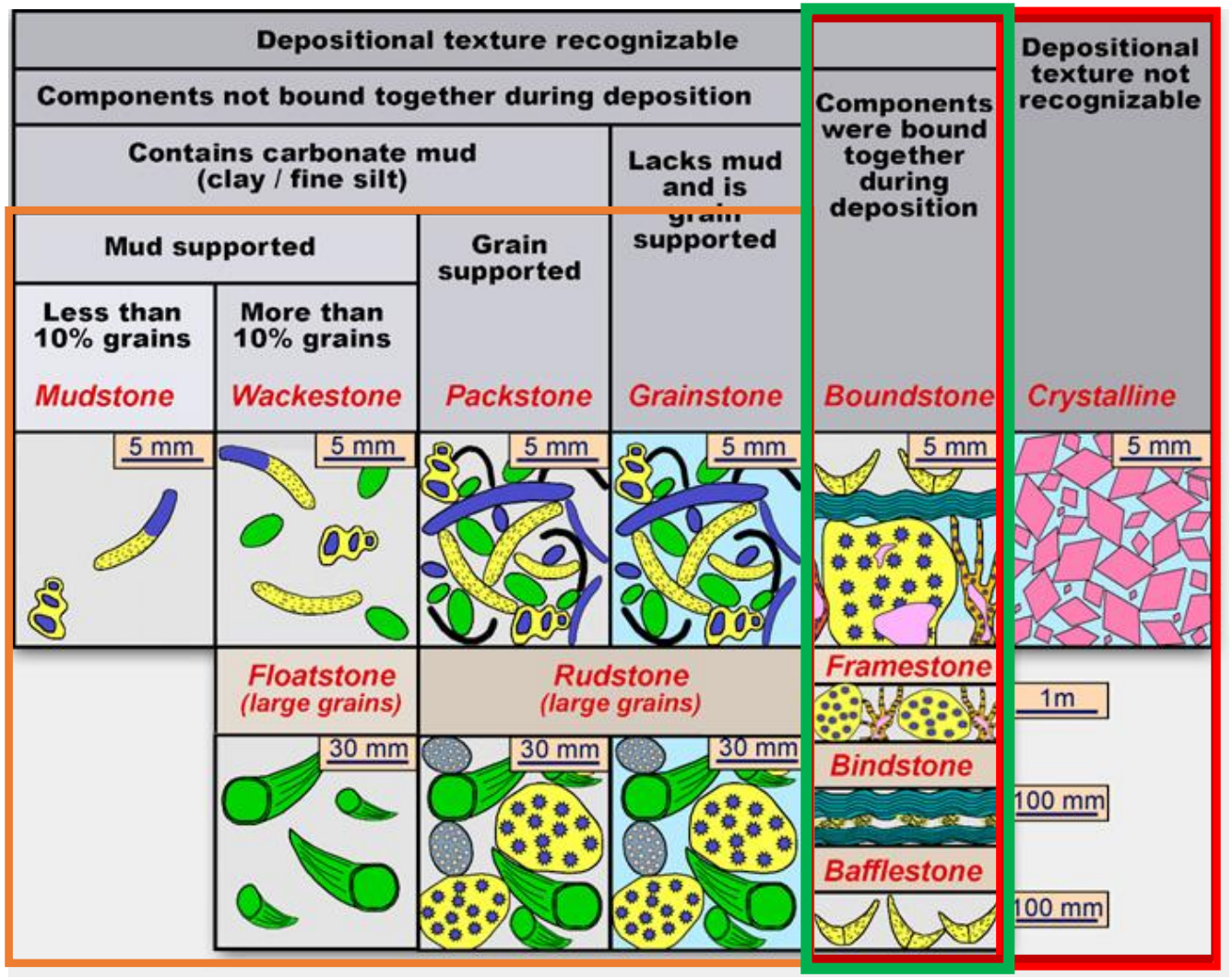


Fig. 8.4. *Fossiliferous limestones classification* after Dunham (1962) and Folk (1959, 1962). Both classifications distinguish allochthonous limestones (mudstone, wackestone, packstone, grainstone) and autochthonous limestones (here called boundstone or biolithite). Limestones whose components were deposited as discrete grains are grouped according to mud-support or grain-support and the abundance of grains. The Dunham classification stresses the depositional fabric, the Folk classification tries to evaluate hydrodynamic conditions. Both classifications consider the dominating groundmass types. Note the divergent categorization of limestones with abundant, densely packed grains and a fine-grained matrix or mixed fine-grained/sparry groundmass (packstone).

- Klasifikacije prema Dunhamu (1962) i Folku (1959, 1962), s obzirom na udio, veličinu i tip čestica, vrstu veziva

ALOHTONI AUTOHTONI



veličina zrna!

klastične, organogene i kemogene karbonatne stijene

- Klasifikacija prema Dunhamu (1962), dopunjeno po Embry & Clovan (1971)

Klasifikacija prema Folku (1962)

	Over 2/3 Lime Mud Matrix				Subequal	Over 2/3 Spar Cement		
Percent Allochems	0 - 1 %	1 - 10 %	10 - 50 %	over 50%	Spar and Lime Mud	Sorting poor	Sorting good	Rounded and abraded
Representative Rock Terms	Micrite	Fossil-iferous Micrite	Sparse Biomicrite	Packed Biomicrite	Poorly washed Biosparite	Unsorted Biosparite	Sorted Biosparite	Rounded Biosparite
								
1959 Terminology	Micrite	Fossil-iferous Micrite	Biomicrite			Biosparite		
Terrigenous Analogues	Claystone		Sandy Claystone	Clayey or Immature Sandstone		Submature Sandstone	Mature	Supermature Sandstone

Lime Mud Matrix Sparry Calcite Matrix

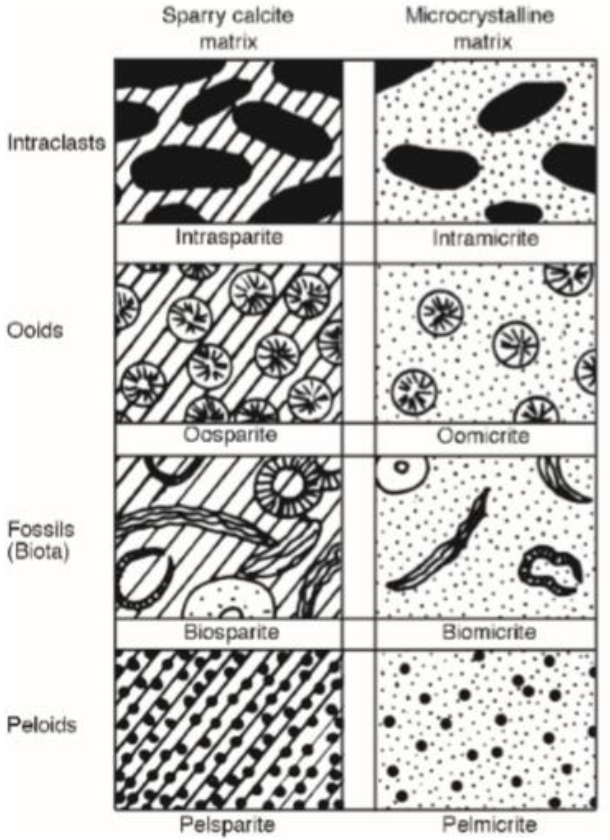
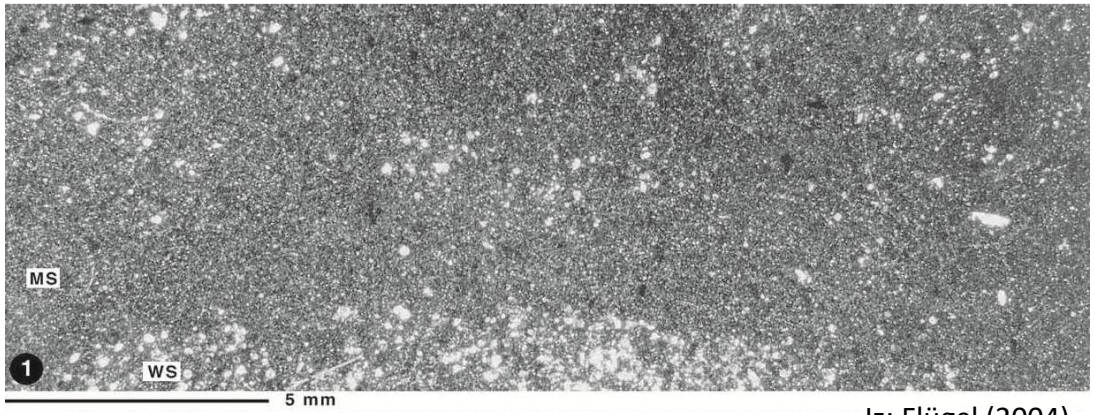
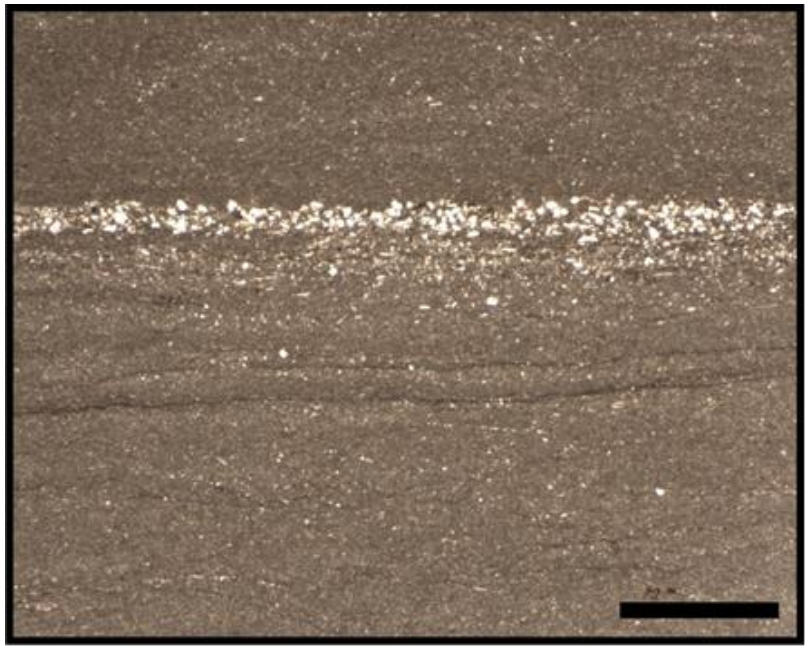


Fig. 8.6. *Concept and textural spectrum of the Folk classification.* Modified from Folk (1962). Note the increasing textural maturity from left to right. Dismicrite is omitted in this figure.

Mudstone / madston

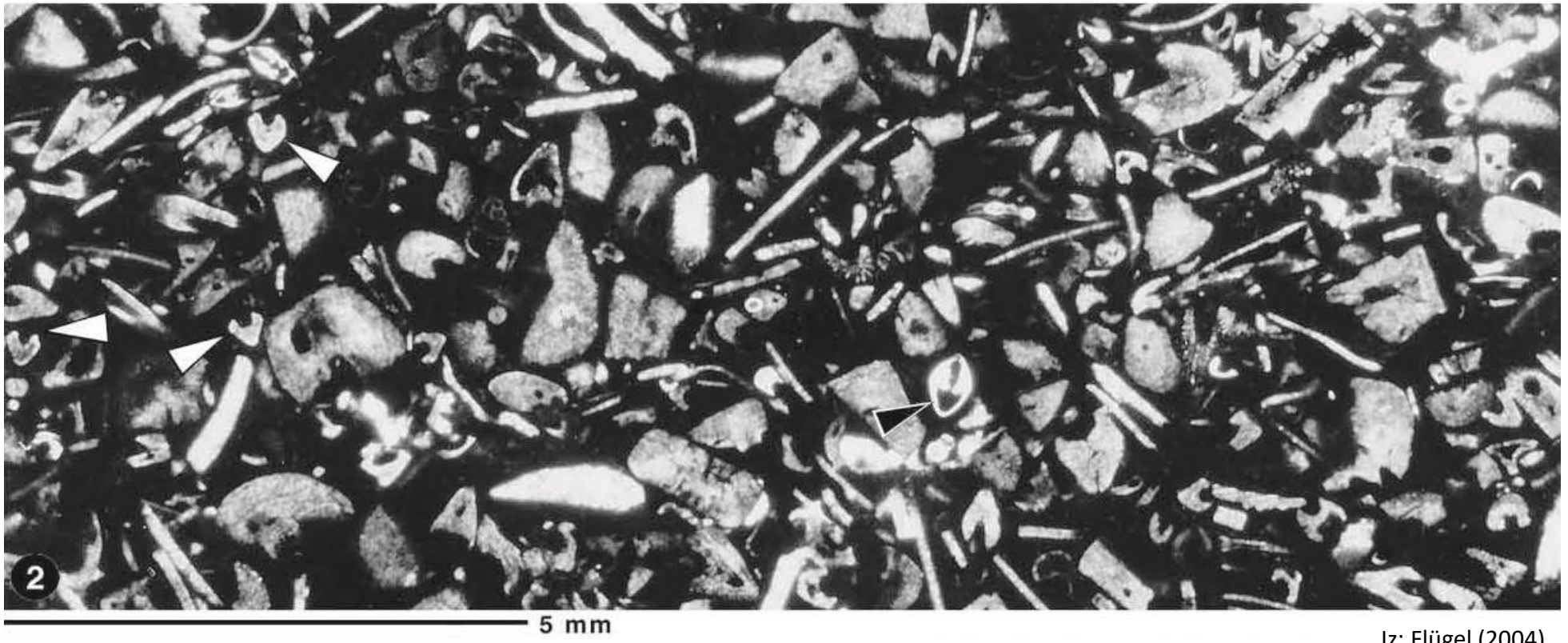


Iz: Flügel (2004)



< 10% čestica

Wackestone / vekston



Iz: Flügel (2004)

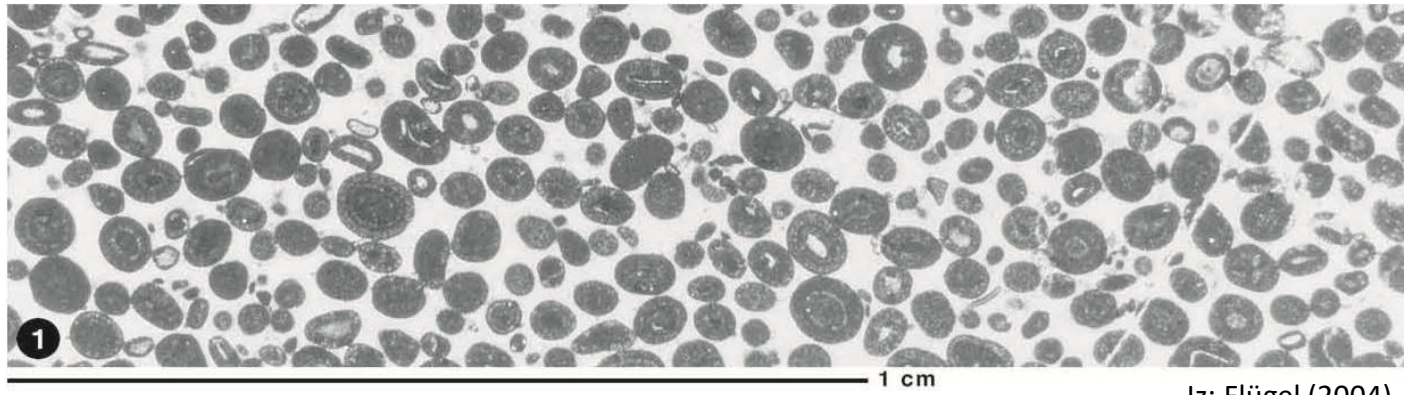
> 10% čestica, muljna potpora

Packstone / pekston

Iz: Flügel (2004)

> 10% čestica koje su međusobno u dodiru (zrnska potpora)

Grainstone / grejnston

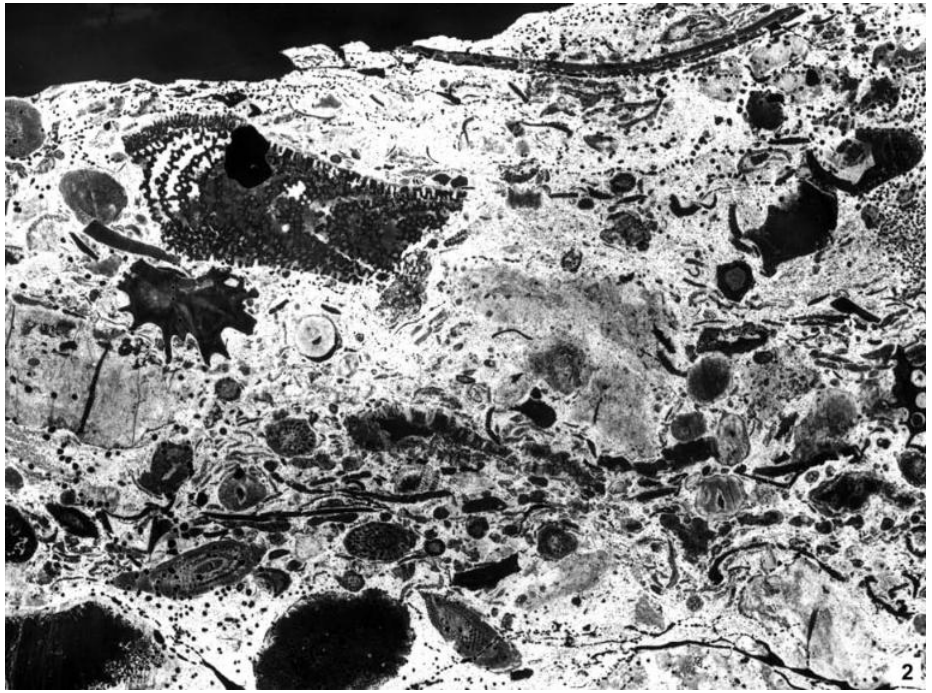


Iz: Flügel (2004)

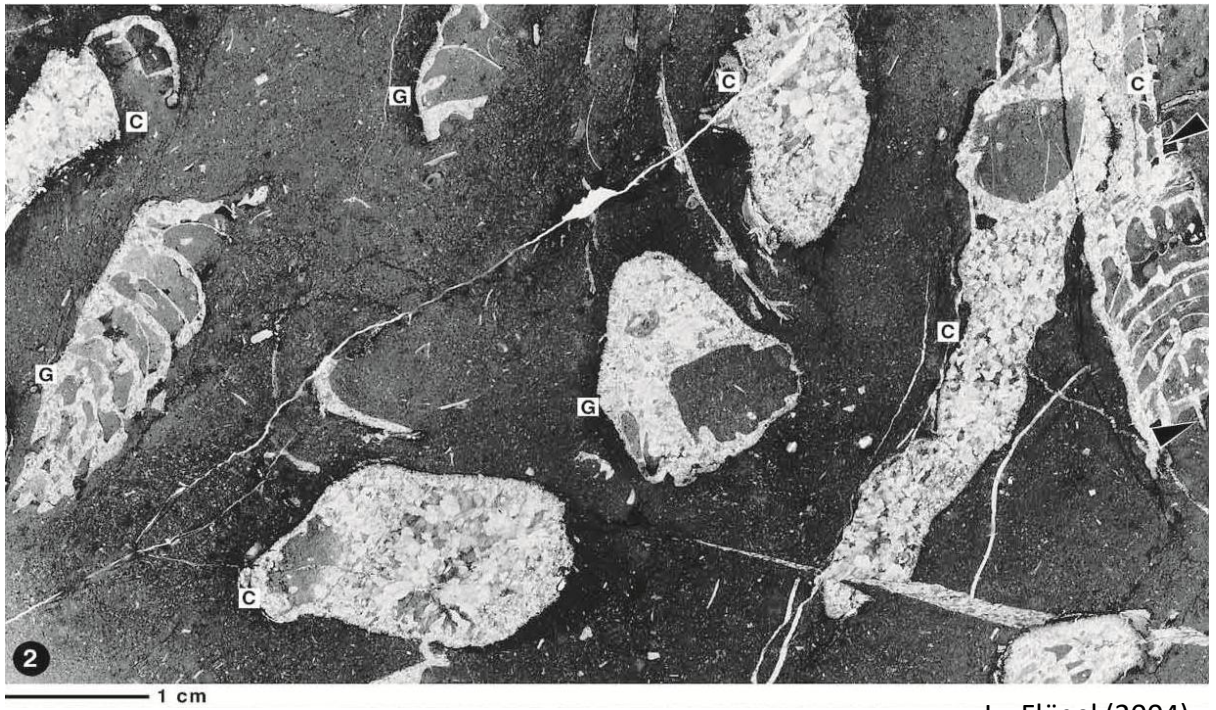
- Različite čestice – skeletne i ne-skeletne
- Nema mulja

Floatstone / floatston

- Veličina čestica!
- Ekvivalent vekstonu



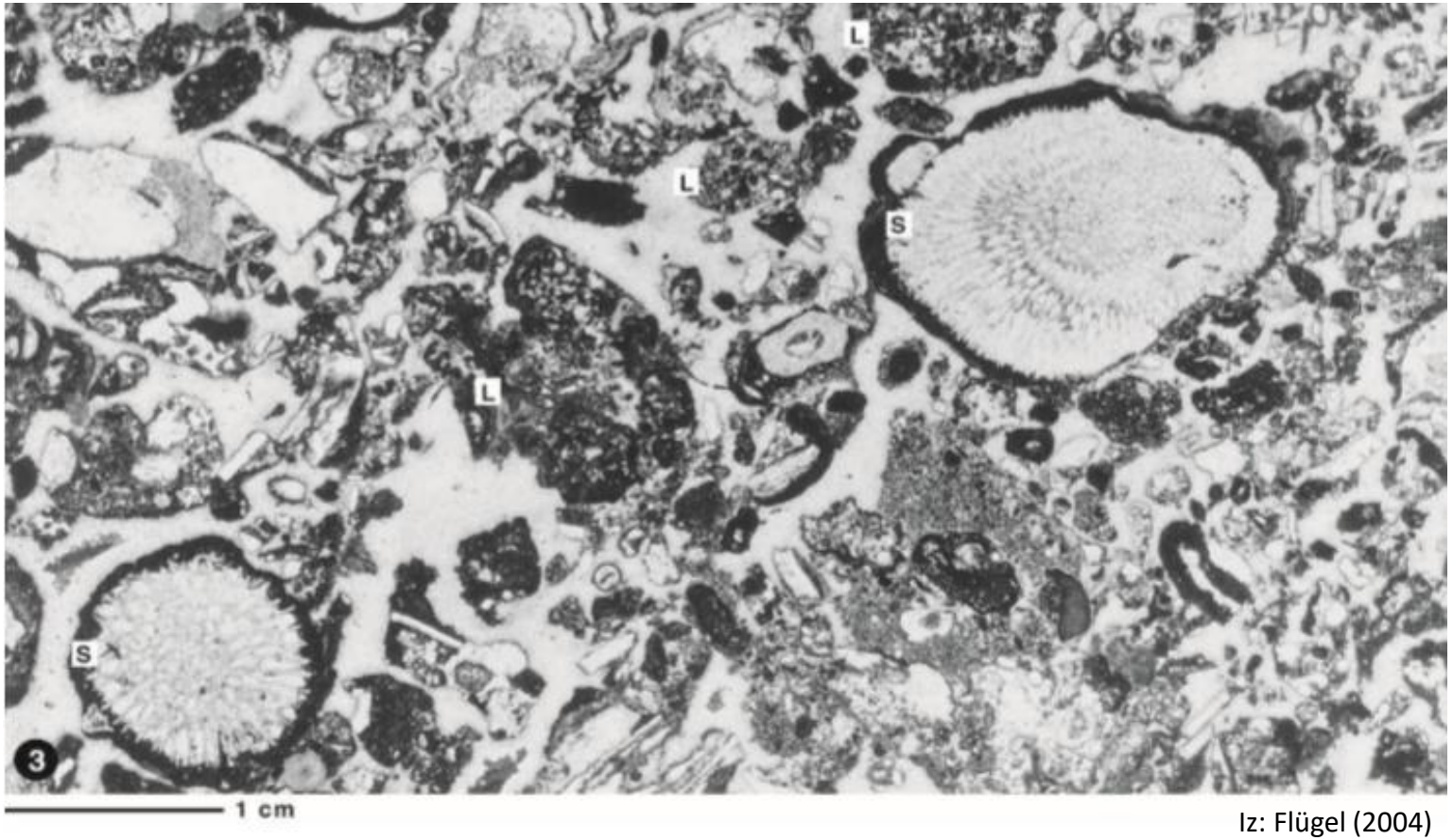
Sremac (2005)



Iz: Flügel (2004)

Rudstone / radston

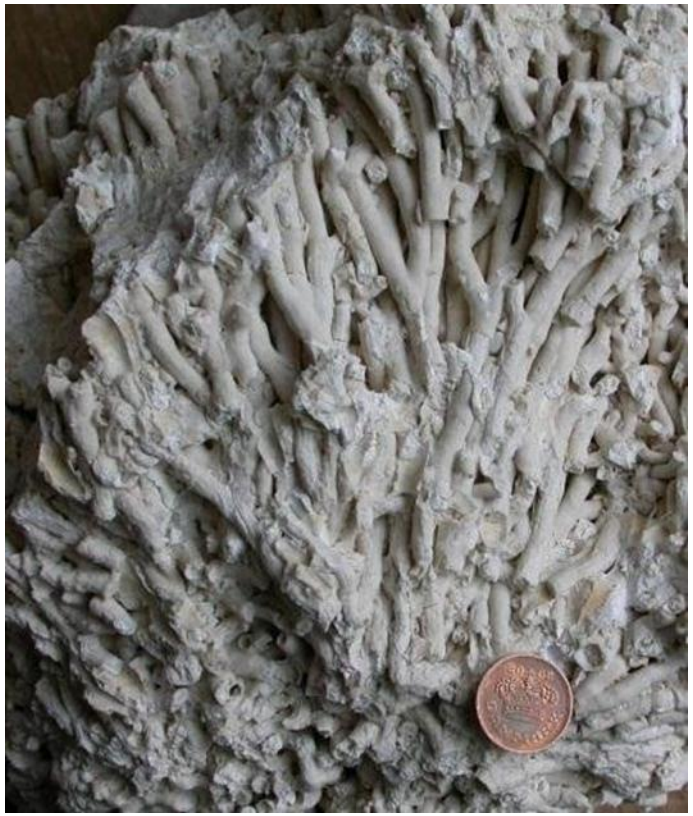
- Veličina čestica!
- Ekvivalent pekstonu do grejnstonu



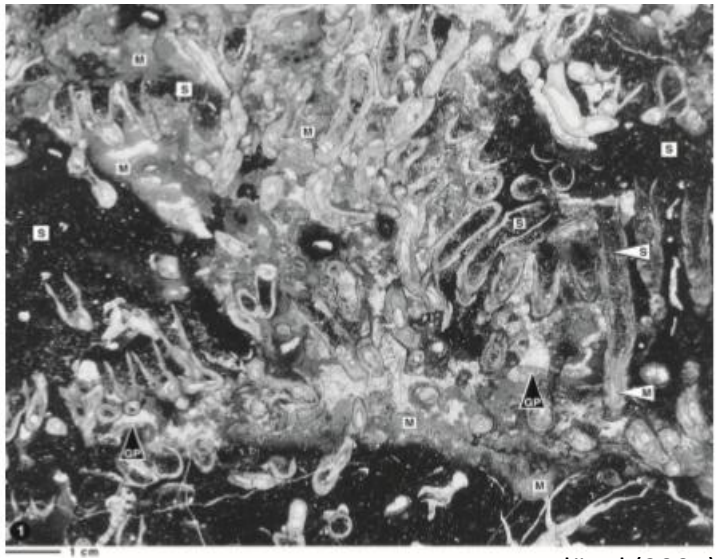
Iz: Flügel (2004)

Organogene karbonatne stijene

- Autohtoni biolititi:
  - Bafflestone (sedimentne zamke)



Wesenberg Lauridsen et al., 2014

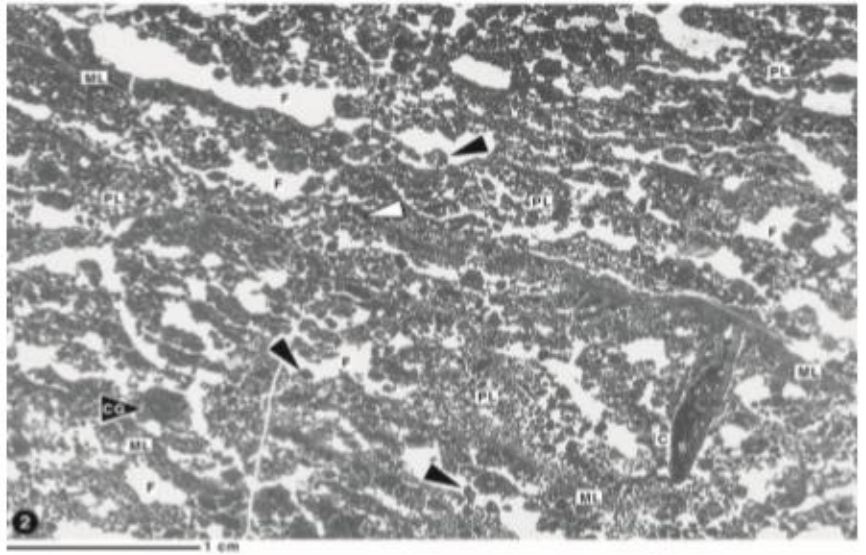


Iz: Flügel (2004)

Organogene karbonatne stijene

- Autohtoni biolititi:
  - Bindstone
    (sljepljeni sedimenti)

https://www.wisegeek.com/what-is-boundstone.htm

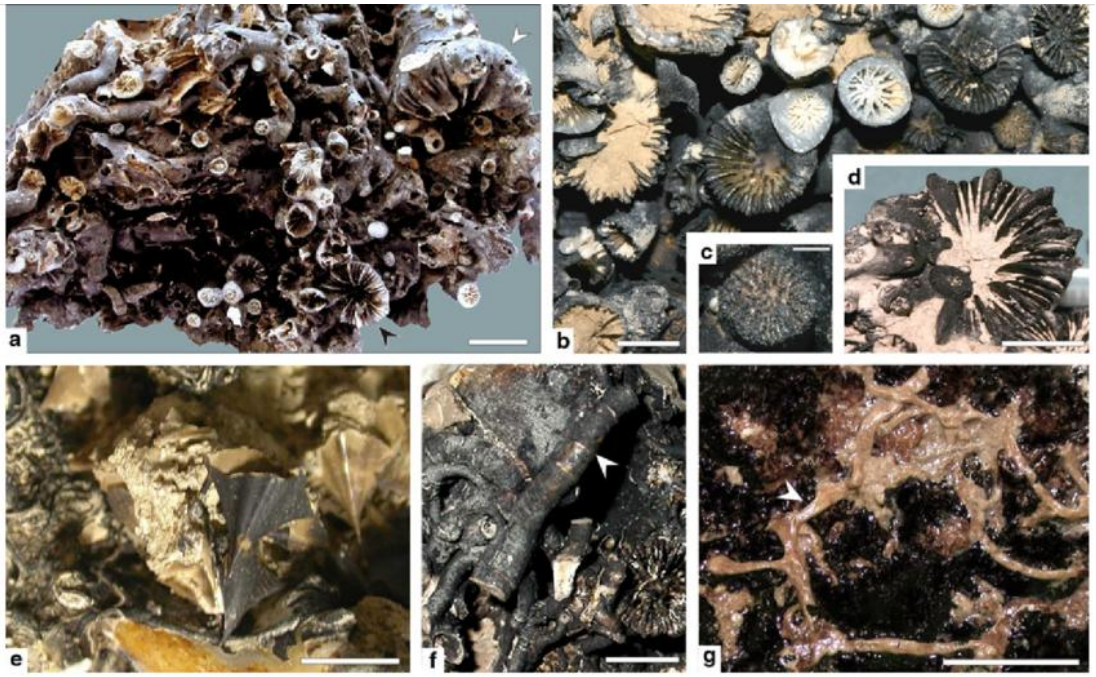


Iz: Flügel (2004)

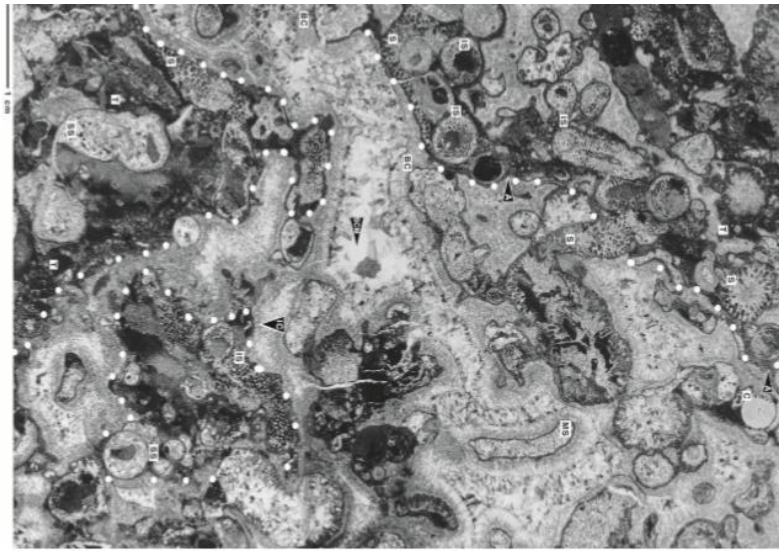
Organogene karbonatne stijene

- Autohtoni biolititi:
  - Framestone (grebenski sedimenti)

Sremac (2005)



DOI: 10.1007/s10347-010-0247-8



Iz: Flügel (2004)