

D. DURICRUSTS

Field Note D4a11. Pedogenic silcretes – K. Textures



Silcrete layer.

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Pedogenic silcretes display a wide variety of textures, from massive to nodular to conglomerate and breccia. Silcretes contain clasts of other sediments. In the Study Area most of the silcretes contain rounded clasts (conglomerate).

Conglomerate and breccia (Figure 1)

A **clastic rock** made of particles larger than 2 mm in diameter is either **conglomerate** or **breccia**. **Conglomerate** has rounded clasts while **breccia** (origin in the Italian language) has angular clasts. Since water transport rapidly rounds large clasts, **breccias** normally indicate minimal transport.



Figure 1. Top – conglomerate silcrete. Bottom - breccia silcrete.

Nodular (globular – see definition below) is another texture of silcretes and should not be confused with conglomerate (Figures 2 and 3).

'**Glaebule**' is a pedological term for a concretionary or nodular structure, which encloses greater amounts of certain constituents, or has a different fabric, or a distinct boundary with the surrounding matrix.



Figure 2. Top and bottom: nodular (globular) silcrete.

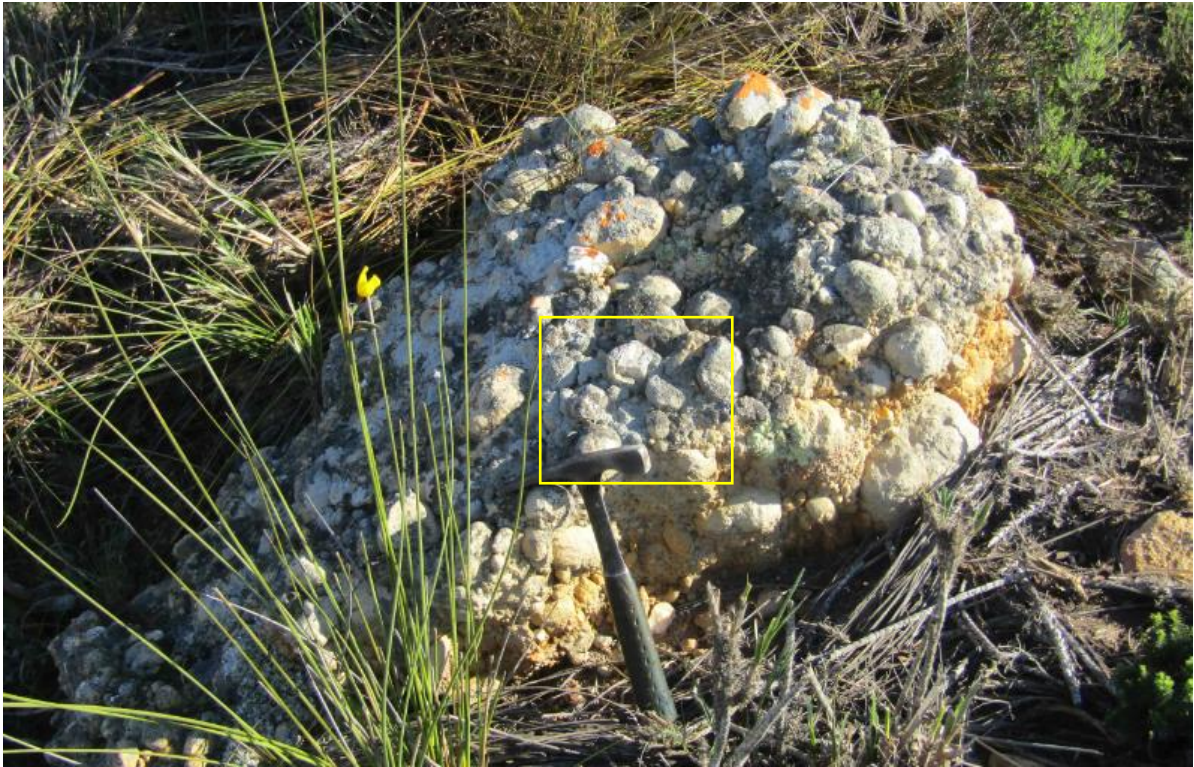


Figure 3. Top and bottom: nodular (globular) silcrete. Box at top photo enlarged at bottom photo. Note the angular quartz clast within a nodule (arrow).

'Candle wax drips' (Figure 4).



Figure 4. Top and bottom: 'candle wax drips'. Box in top photo enlarged in bottom photo.

Botryoidal This texture is one in which the mineral has a globular external form resembling a small bunch of grapes (*botrys* in ancient Greek) (Figure 5).

This is a common form in many minerals, particularly hematite, the classically recognised shape and in goethite, smithsonite, fluorite and malachite.



Figure 5. Top and bottom: botryoidal texture.

Stalactites (Figure 6)



Figure 6. Top and bottom: silcrete stalactites.

Massive and conglomeratic textures in columnar habit (Figure 7).



Figure 7. Silcrete columns. Top – massive. Bottom – conglomeratic.

Massive and conglomeratic textures in cushion habits (Figure 8).



Figure 8. Silcrete cushions. Top – massive. Bottom – conglomeratic.

Massive and conglomeratic textures in lenticular habits (Figure 9).

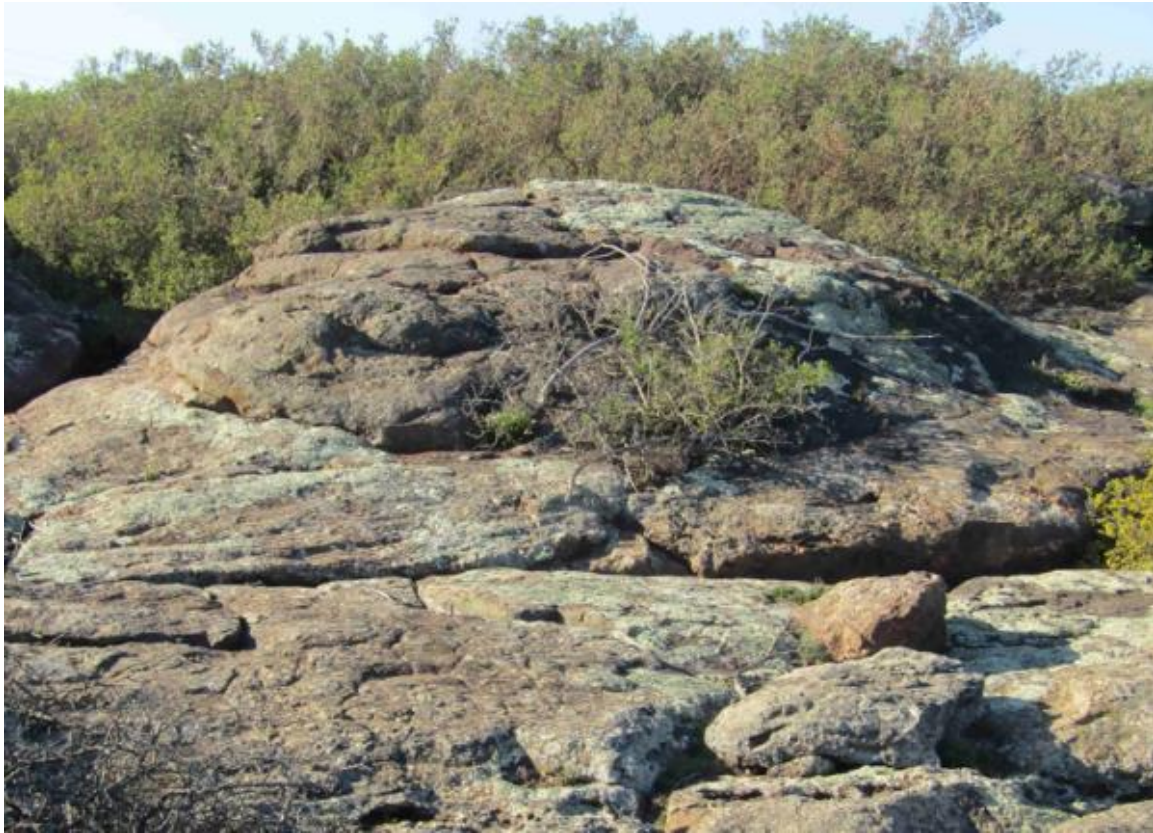


Figure 9. Silcrete lenses. Top – massive. Bottom – conglomeratic.

Massive and conglomeratic textures in slab habits (Figure 10).



Figure 10. Silcrete slabs. Top – massive. Bottom – conglomeratic.