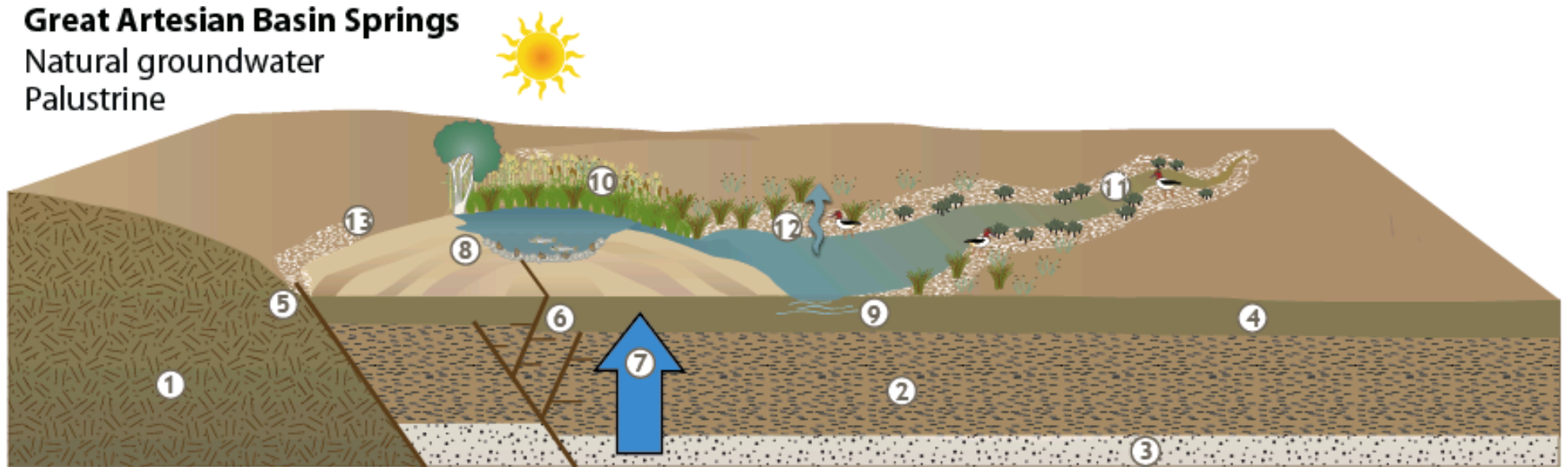


# Great Artesian Basin Springs

Natural groundwater

Palustrine



Natural discharge from the Great Artesian Basin (GAB) provides a permanent water supply to a range of types of springs, including mound springs, mud springs, boggomoss springs, spring pools or groundwater seeps. The springs tend to occur around the margins of the GAB where generally fresh water escapes to the surface under hydrostatic pressure.

Springs of the GAB range in size from a few centimetres to about 100 metres in diameter. Individual springs may be separated from the next spring by tens of kilometres of unwatered land, leading to a high degree of isolation for plants and animals dependent on spring discharges. This isolation has resulted in high levels of species endemism and varied ecosystem responses to the presence of water. Artesian spring wetlands can support lush vegetation, although some springs (commonly known as mud springs) have an unvegetated, dried exterior from which thick mud occasionally oozes to the surface.

Location example: Dalhousie Springs

## Features

- ① Fractured rock basement
- ② Confining layer: Bulldog Shale
- ③ Aquifer: Great Artesian Basin
- ④ Sediments
- ⑤ ⑥ Fractured rock allows the water to move upward through to the surface
- ⑧ There are 2 processes that create mounds; biological and physical  
Biological: Silt and travertine deposits with stromatolites  
Geophysical: Precipitation occurring as a result of degassing water arising from pressure changes
- ⑨ Local watertable due to surface water recharge
- ⑫ ⑬ Salt scalds



Riparian Growth



Fringing vegetation

Reeds

Herb



Fish



Waders



Aquatic Invertebrate

## Processes

- ⑤ Fractured rock groundwater spring from Great Artesian Basin discharge
- ⑥ GAB spring fed by water from the Great Artesian Basin
- ⑦ The water pressure from the Great Artesian Basin is the driving variable for the system
- ⑨ Very little recharge due to high evaporation levels and soil type
- ⑩ High level of endemic species due to long term isolation
- ⑪ Can form into a channel with enough water flow, commonly referred to as a 'spring tail'  
The dynamic nature of spring tails are governed by changes in evapotranspiration, barometric pressure and tidal influences
- ⑫ Salt scalds along spring tails occur on heavy clay soils and are exacerbated by high evaporation rates
- ⑬ Salt scalds occur along the fault line due to leakage from water source

### Species Diversity (Qualitative TBD)



### Species Endemism (Qualitative TBD)



### Salinity Threshold

