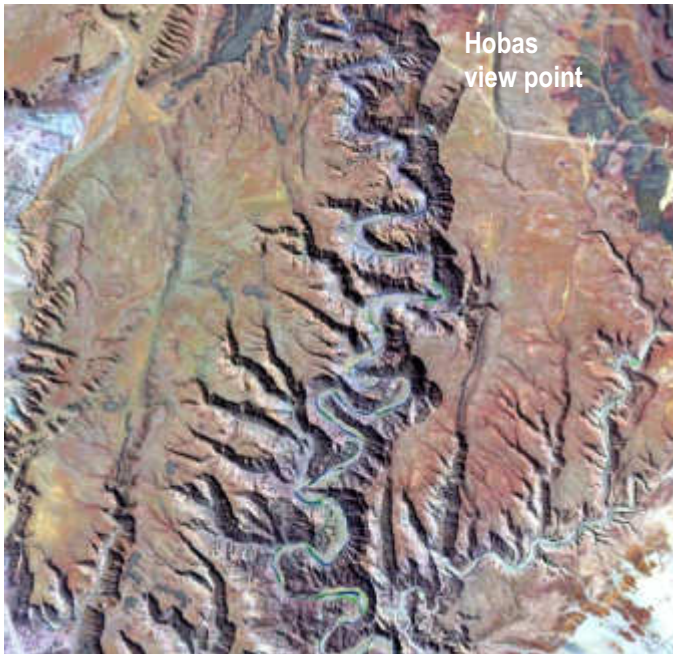


# FISH RIVER CANYON

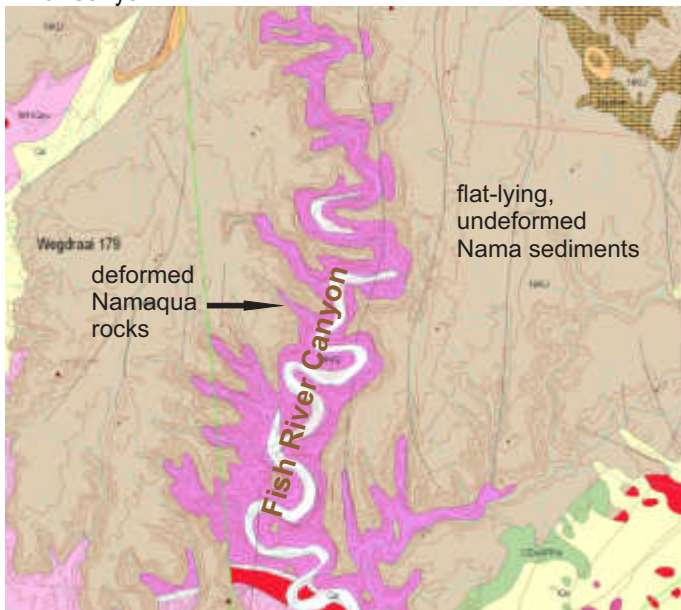


Source: *Roadside Geology of Namibia*

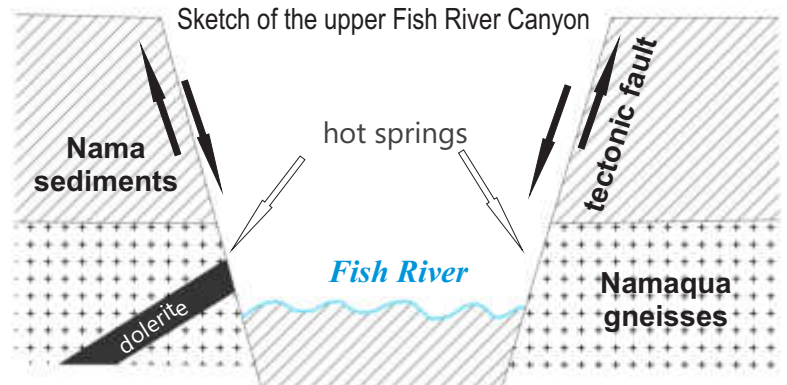
Situated some 80 km west of Grünau, the Fish River Canyon starts about 30 km upstream of Ai-Ais Hot Springs and winds its way more than 50 kilometres to the main view point on Farm Hobas. Although a mere trickle during the dry season, the Fish River over millions of years has managed to cut a 160 to 550 m deep gorge through both the flat-lying Nama sediments of the Huns Plateau and the underlying deformed and metamorphosed gneisses of the Namaqua Complex, which can be easily distinguished in the canyon walls. Second in size and grandeur only to the Grand Canyon of the Colorado in Arizona (USA), it is a national monument, as well as one of the most popular tourist attractions in southern Namibia.



Satellite image (above) and geological map (below) of the Fish River Canyon



Along the fault zones forming the sides of the canyon groundwater rises to the surface to create a number of hot springs, which are reputed to have therapeutic properties. The two best known are Ai-Ais (60°C) and, a little upstream, Sulphur Spring (56°C). Part of the Ai-Ais/Richtersveld Transfrontier Park, Ai-Ais Hot Springs Spa at the southern end of the canyon is a veritable oasis in the middle of a grandiose mountain scenery teeming with wildlife and birdlife.



During the Dwyka ice age, some 350 million years ago, the valley of an early predecessor of the Fish River was gouged out by southward-moving glaciers and eventually filled with glacial sediments, sandstone and shale of the Karoo Supergroup. The modern canyon began to form ca. 130 m. y. ago, after break-up of the Gondwana Supercontinent, through uplift of the new-formed African continent and the resultant increased gradient. As shown by its many bends, the Fish River, which rises between Rehoboth and Maltahöhe, originally flowed through a broad valley with a comparatively low gradient. During this period the glacial deposits and their cover of Karoo sediments were nearly completely eroded; the rocks exposed today in and around the Fish River Canyon belong to the Namaqua Metamorphic Complex (~1300 m. y.), overlain by flat-lying ~550 m. y. old sandstones and black limestones of the basal Nama Group. Prominent dark dykes of dolerite, which intruded the Namaqua rocks some 770 m. y. ago, can be easily identified within the lighter-coloured gneisses of the canyon walls. While the upper canyon (8 km wide, 160-190 m deep) forms a tectonic trough, which subsided along fault lines within the earth's crust, the southern lower canyon (5 km wide, 460 to 550 m deep) is mostly erosional and was incised into the underlying rocks by force of the river current.

