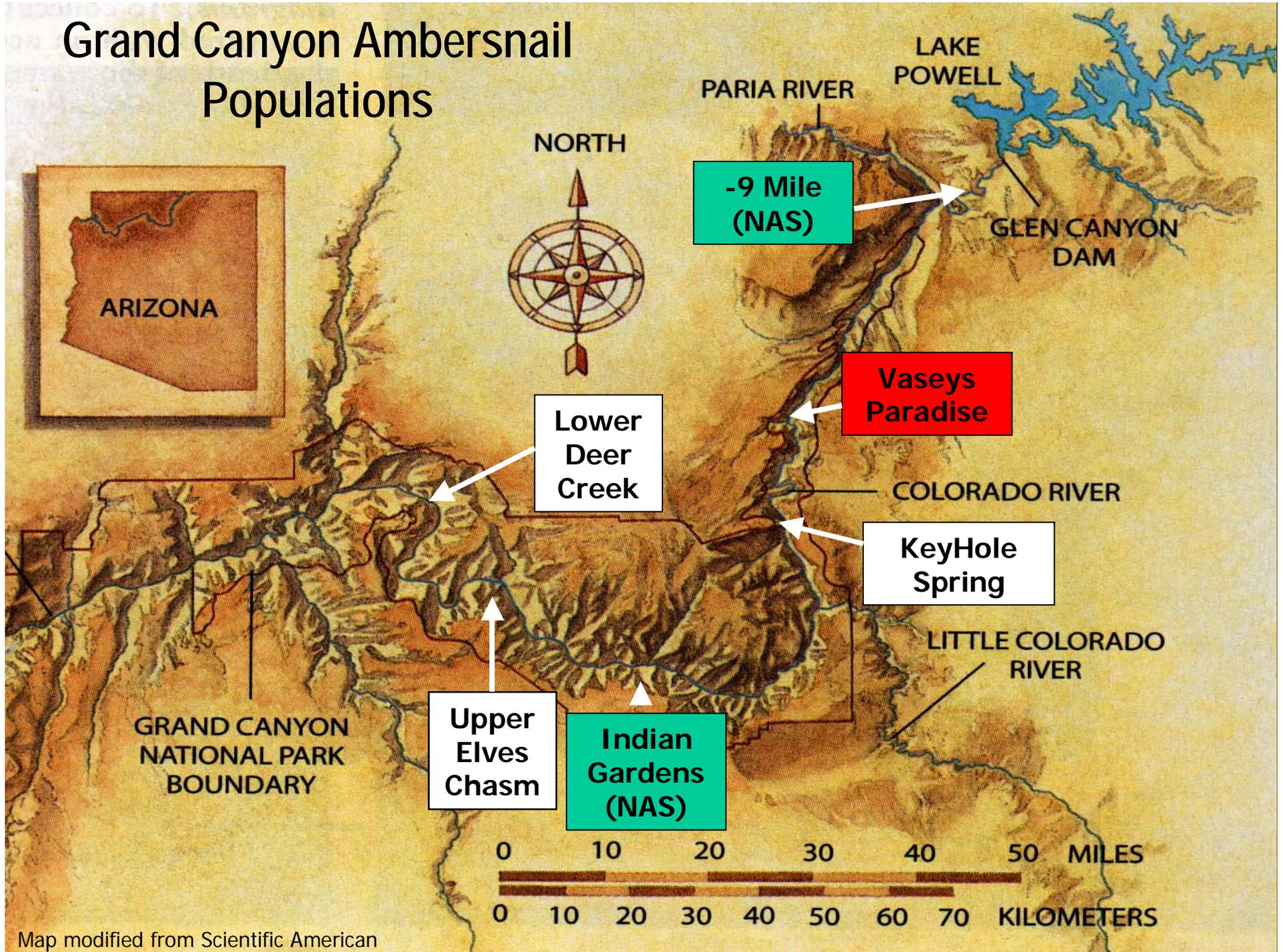


Kanab Ambersnail Update



Glen Knowles
TWG Meeting
Phoenix, Arizona
September 24, 2004

Grand Canyon Ambersnail Populations



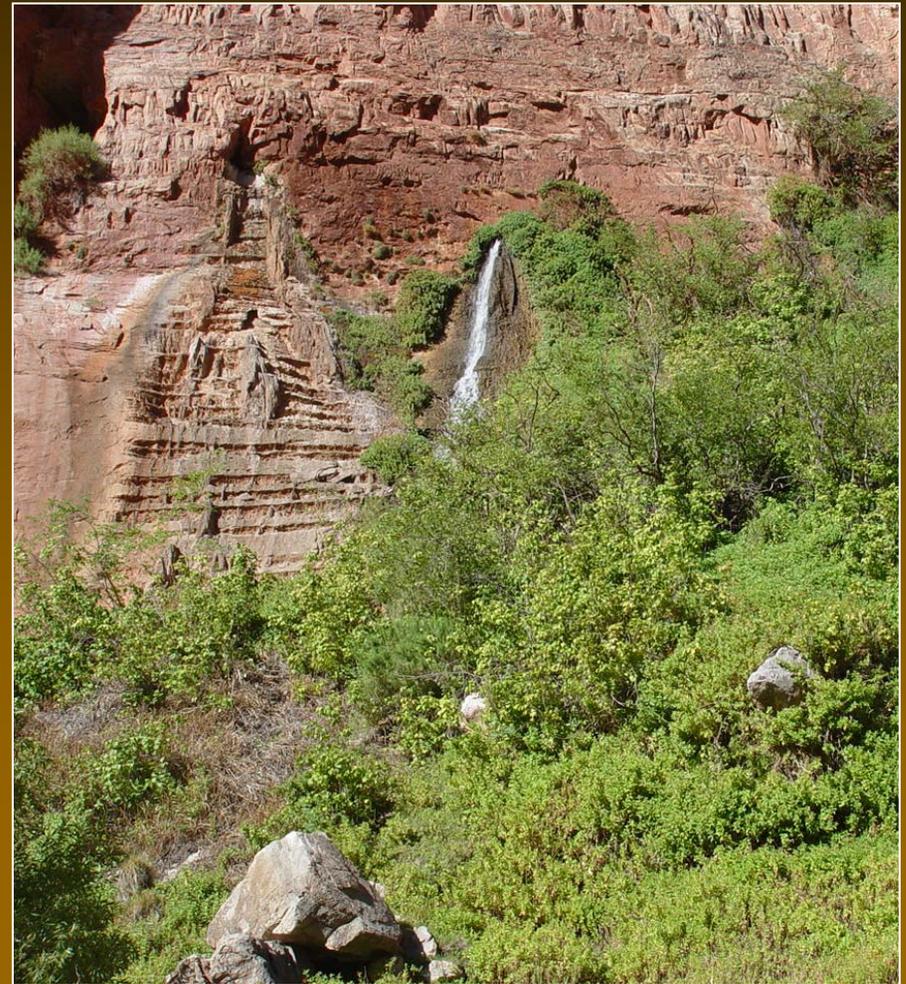
Map modified from Scientific American

Effects of the continuing drought at Vasey's Paradise

1999



2004



Upper Elves Chasm



- AZGFD translocated 150 snails in September 1998 and October 1999
- 20 additional KAS translocated in July 2000 for genetic variability
- Monitored since October 1998
- Continual recruitment into population
- Occupation of new habitat
- Currently classified as "successful"
- Unaffected by drought

Key Hole Springs



- Release area 5 m square
- Total potential habitat 9.7 m square
- AZGFD translocated 150 snails in September 1998 and October 1999
- Monitored since October 1998
- Since 2000 the population has steadily declined to zero
- Continuously drier with each survey due to drought
- Currently classified as "unsuccessful"

Lower Deer Creek



- Total potential habitat 78.8+ m square
- 150 snails translocated in September 1998 and October 1999
- 10 additional KAS translocated in July 2000 for genetic variability
- Monitored since October 1998
- Since 2000 the population has steadily declined to zero
- Currently classified as "unsuccessful"
- Size of potential habitat makes it difficult to detect if snails are actually absent or not