

BACKGROUND

The Virgin River basin is characterized by a diverse landscape with unique communities of fauna and flora. The basin encompasses approximately 15,600 km² (6000 mi²). Virgin River headwaters are in Washington and Kane County, Utah, and the stream flows in a general southwesterly direction to empty into Lake Mead on the Colorado River in Nevada. Elevations range from 3300 m (10,000 ft) above mean sea level (msl) near the headwaters to less than 700 m (2000 ft) at Littlefield, Arizona. The river varies from reaches with narrow, steep-walled canyons and steep gradients to low desertland with broad open canyons and low gradients. Mean annual precipitation ranges from about 20 cm (8 in) at low elevations to about 100 cm (40 in) at higher elevations.

Due to the diverse topography, this river and its associated riparian area and floodplain provides habitat for over 366 species of wildlife (Appendix A). Of these, 81 species have been identified as sensitive. There are six fish species indigenous to the basin: woundfin (*Plagopterus argentissimus*), Virgin River chub (*Gila seminuda*), flannelmouth sucker (*Catostomus latipinnis*), desert sucker (*Catostomus clarki*), speckled dace (*Rhinichthys osculus*), and Virgin spinedace (*Lepidomeda m. mollispinis*). Except for the speckled dace, all of these have been listed or are candidates for federal listing under the ESA.

The Virgin spinedace was recognized in 1979 as a threatened species by the scientific community. The Endangered Species Committee of the American Fisheries Society added it to their list of threatened and endangered fish after assessing criteria consistent with the ESA (Deacon et al., 1979). Their determination of the species' status was based on review of original data and discussions with pertinent agencies and knowledgeable scientists. On May 18, 1994, the United States Fish and Wildlife Service (FWS) proposed the species for listing as a threatened species pursuant to the ESA (59 FR 25875).

Systematics and Description

The Virgin spinedace, *Lepidomeda mollispinis mollispinis* is a member of an endemic tribe of western cyprinids, the Plagopterini (Miller and Hubbs, 1960). The group is comprised of three genera: *Meda*, *Plagopterus* and *Lepidomeda*. The first two are monotypic, represented by the spikedace (*M. fulgida*) and woundfin (*P. argentissimus*). *Lepidomeda* is a polytypic genus containing four species: the White River spinedace (*L. albivallis*), the Pahranaagat spinedace (*L. altivelis*), the Little Colorado spinedace (*L. vittata*), and the Virgin spinedace (*L. mollispinis*). *L. mollispinis* is further classified into two subspecies; *L. m. pratensis* (Big Springs spinedace) and *L. m.*