عنوان مقاله:

Osmoregulatory capabilities of Zander (Sander lucioperca) fingerlings in different salinities of the Caspian Sea

محل انتشار:

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خلاصه مقاله:

Osmoregulation capabilities of two size groups (۱ and ۲g) of zander , Sander lucioperca, fingerlings were investigated survival rate, plasma osmolarity, sodium (Na+), chloride (Cl-) ion concentrations and cortisol level within ۰, ۶, ۲۴, ۷۲ and ۲۴۰ h after abrupt transfer from freshwater to ۷ and ۱۲‰ salinity. Also, some hematological parameters were measured at ۲۴۰h. The plasma osmolarity and ion concentrations (Na+, Cl-) increased immediately after the transference to ۷ and ۱۲‰ salinity, reaching maximum at ۷۲h in ۱g and at ۲۴ h in ۲g fingerlings, and significantly decreased at ۲۴۰ h, while the freshwater control group maintained almost constant during ۱۰ days which showed lower than the salinity groups. The pattern of cortisol level changes was similar in two size groups after exposure to different salinities and it reflected stress of handling. There were no significant differences between hematological values of two salinity treatment groups than the freshwater control at ۲۴۰h. The result showed, not only ۲g zander fingerlings acted better than ۱g in faced with salinity but also the fingerlings weighing ۱g could survived and tolerate Caspian Sea water salinity up to ۱۲‰. It is suggested that the release of zander weighing from ۱g would help to restocking management of this species in the southern Caspian Sea.

کلمات کلیدی:

Sander lucioperca, size, salinity, Caspian Sea, osmoregulation, cortisol

لینک ثابت مقاله در پایگاه سیویلیکا: