The aim of the present project is to check if the fish from Gobiidae family originating from the Ponto-Caspian region (i.e. Black, Caspian and Azov seas and the adjacent rivers emptying into these seas) are more effective in recognizing, learning and avoiding predators than native fish co-occurring with the aliens in the introduced range. Two goby species (racer goby *Babka gymnotrachelus*, monkey goby *Neogobius fluviatilis*) as well as their native counterparts from the same prey guild (European bullhead *Cottus gobio*, gudgeon *Gobio gobio*, respectively) will be used as a model. The project consists of a field study and laboratory experiments. We are going to test behavioral responses of the fish to predator odour as well as to alarm cues from other prey individuals and compare defense capabilities of the species against predation. We hypothesize that anti-predator defense mechanisms specific to the Ponto-Caspian gobies have an advantage over the native species in more effective minimizing risk of predation in waters of the introduced range.