

## Could Iranian Coccinellids be used to Biocontrol Pests in Australian Crops?

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Coccinellids are known to prey on more than 214 species of aphids and more than 40 species of scale insects in agricultural ecosystems. Forty species of coccinellids were collected in Guilan Province as part of a faunistic survey conducted through 1985-2005. These species belong to 19 genera and were collected during spring and summer in two different regions: along the wet, humid southern coast line of the Caspian Sea with rainfall between 800-1200mm, and south with dry climate with rainfall between 300-450mm. The species were confirmed by specialists (mostly by Prof. Fursch from Germany) and listed as follows:

*Adalia bipunctata* (Linnaeus),  
*Adalia decempunctata* (Linnaeus),  
*Anliostica bitriangularis* (Say),  
*Brumus octosignatus* (Gelbler),  
*Brumus undecimpunctata* (Linnaeus),  
*Chilocorus bipustulatus* (Linnaeus),  
*Chilocorus stigma* (Say),  
*Clitostethus arcuatus* (Rossi),  
*Coccinella hieroglyphica* (Linnaeus),  
*Coccinella magnifica* (Redtenbacher),  
*Coccinella septempunctata* (Linnaeus),  
*Coccinella undecimpunctata* Linnaeus,  
*Cryptolaemus montrouzieri* (Mulsant),  
*Exochomus flavipes* (Thunb.),  
*Exochomus nigromaculatus* (Goeze),  
*Exochomus nigripennis* (Erich.),  
*Exochomus pubescens* (Kuster),  
*Exochomus quadripustulatus* (Linnaeus),  
*Hippodamia variegata* (Goeze),  
*Hyperaspis polita* (Weise),  
*Nephus biguttatus* (Mulsant),  
*Nephus bipunctatus* (Kugelann),  
*Oenopia conglobata* (Linnaeus),  
*Oenopia oncina* (Oliver),  
*Pharoscymnus ovidius* (Sicard),  
*Propylea quatuordecimpunctata* (Linnaeus),  
*Psyllobora vigintiduopunctata* (Linnaeus),  
*Rodolia cardinalis* (Mulsant),  
*Scymnus apetzi* (Mulsant),  
*Scymnus araraticus* (Khnzorian),  
*Scymnus auritus* (Thnberg),  
*Scymnus flavicollis* (Redtenbacher),  
*Scymnus quadrigutatus* (Capra),

*Scymnus levaillantii* (Mulsant),  
*Scymnus rubromaculatus* (Goeze),  
*Scymnus subvillosus* (Goeze),  
*Scymnus syriacus* (Marseul),  
*Serangium montazeri* (Fursch)  
*Stethorus gilvifrons* (Mulsant),  
*Stethorus punctillum* (Weise),

#### CONCLUSIONS

The coccinellids collected in this investigation were from infested farms and orchards feeding on aphids, scales and whiteflies; additional investigations are needed to collect other species in urban areas, natural landscapes, forests and woodland. Even though more than 300 species of ladybirds are reported from Australia (Australian Museum online) , some species collected in this present study from Iran have not been found in this country. Investigation are needed to determine the beneficial species for potential import and export between the two countries, Iran and Australia, for future biological control programs.