Plants are constantly endangered by herbivores. Plants have adapted and created a wide arsenal of defences during approximately 410 million years of coexistence. Their role consists of fading the herbivores off or reduce suffered damage. This bachelor's thesis focuses on mechanisms that were proven to serve as plant defences. It is specifically about interactions between invertebrate herbivores and plants of terrestrial ecosystems. Prediction of herbivory by some traits is mentioned as well. Information about characteristics of plants which affects preferences of herbivores is interesting due to its possibility of aplication in agriculture or biological control of invasive species.