It has been known that under sunlight the external shell of many beetles in the scarabaeidae family reflects only left-handed circularly polarized light. Light is a transverse electromagnetic wave. When viewed toward the light source, the end of the electric field may trace a line, a circle, or an ellipse, which results in linearly, circularly and elliptically polarized light. Circularly polarized light is further divided into left-handed and right-handed light, where the electric field rotates counterclockwise and clockwise, respectively. We studied the polarization properties of light scattered from Japanese beetles, which are a main pest to crops in the United States. We use a daylight simulator as the light source. The light first passes through a circular polarizer, which consists of a linear polarizer plate and a Fresnel rhomb. The circular polarizer provides pure left-handed or right-handed polarized light, depending on the orientation of its linear polarizer. The scattered light from the insect is inspected by a circular analyzer, which only transmits circularly polarized light of a certain handedness. We have found that the green metallic light scattered from the head of the beetle is entirely left-handedly polarized, regardless of the polarization state of the incident light. The rim of the head of the beetle can transfer right-handed incident light into left-handed scattered light. This research is supported by the College of Arts and Sciences Undergraduate Research and Scholarly Activity Grants.