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***Idionotus siskiyou* (Siskiyou Shieldback)—A Katydid found in Southern Oregon (Orthoptera: Tettigoniidae)**

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## *Idionotus siskiyou* (Siskiyou Shieldback)—A Katydid found in Southern Oregon (Orthoptera: Tettigoniidae)

Ron Lyons

For some time now I have been photographing the various species of katydids found in our area and supplying the images to Thomas Walker for the Singing Insects of North America website (<<http://entnemdept.ufl.edu/Walker/buzz/>>). Some of the pictures shown here are also on that website.

About 35 species of katydids have been found in Oregon, some of which are very recent additions. Of these, about 70% belong to the subfamily Tettigoniinae, commonly called the shield-backed katydids. Most of the species in this subfamily have an enlarged pronotum (the top sclerite of the first of the 3 thoracic segments) that extends back to cover the other thoracic segments, part of the wings, and sometimes part of the abdomen (Capinera et al. 2004). (The shape of this shield is reminiscent of some swept back bicycle helmets.) While most of these species are flightless—they develop wings, just not functional flight wings—a few species, such as, *Tessellana tessellata* (see Lyons 2012) and all the members of the genus *Capnobotes* (see Lyons 2011), can fly. Rentz and Birchim (1970 p. 8) stated that: “The life histories of most species are not well known.” The situation for our species hasn’t changed much

since then, in part because of their nocturnal habits and in some cases, apparently restricted distributions. Some genera still need to be revised.

Members of this family are predaceous, and/or supplement their diets with animal matter. Individuals of some species can be active on some roads at night as they look for and feed on insects, mainly dead and dying grasshoppers and katydids. Occasionally, females can be found trying to oviposit in the irregularities of the road surface.

Seven species have been described in the genus *Idionotus* (Rentz and Birchim 1970). Of these species, only one, *Idionotus siskiyou* (Siskiyou Shieldback, Figures 1–4), has a distribution known to extend outside of California. In California this species has a widespread distribution, encompassing much of the the northwest corner of the state (excludes Humboldt and Del Norte Counties at the moment). In Oregon it has been found along our southern border, in Josephine (Rentz and Birchim 1970) and Jackson Counties.



Figure 1: Female *Idionotus siskiyou* found along the Copco Road, Siskiyou County, California on July 26, 2010 about 10:40 pm. The female has a long extended ovipositor. Note the speckle pattern on its body. Photo by Ron Lyons.

Figure 2: Male *Idionotus siskiyou* photographed in Josephine County on Eight Dollar Mountain Road on August 21, 2014. The wings appear as the darker area at the posterior end of the shield. Compared to the female, the male looks truncated. From a distance, ovipositing females can sometimes appear truncated if the ovipositor is inserted deeply into the substrate. Photo by Ron Lyons.





Figure 3: Dorsal view of the end of the abdomen of the male pictured in Figure 2, showing the quadrate cerci. Photo by Ron Lyons.

Rentz and Birchim (1970) reported specimens from a number of California locations as well as two Oregon locations in Josephine County: Grants Pass, collected on 18-VII-1923, and Hayes Hill, collected on 15-VIII-1941.

I have photographic records from the following Oregon locations:  
Jackson County: Highway 66 east of Ashland 2009 August 27–28  
Jackson County: Siskiyou Summit Road 2010 August 12–13  
Josephine County: Eight Dollar Mountain Road  
2012 September 04–05  
2012 September 13–14



Figure 4a: Female *Idionotus siskiyou* found on Eight Dollar Mountain Road in Josephine County Oregon on 2012 September 04–05. Note the redder color and the pale broad stripe down its back. Photo by Ron Lyons.

Figure 4b: Female *Idionotus siskiyou* found on Eight Dollar Mountain Road in Josephine County Oregon on 2012 September 13–14. Note the greyish color and the pale broad stripe down its back. On the abdomen the slightly darker chevrons are part of the diamond-shape pattern. Photo by Ron Lyons.



2012 October 03–04  
2014 August 21–22.  
I also have photographs from the following California locations:  
Siskiyou County: Copco Road 2010 July 26–27  
Siskiyou County: Ager–Beswick Road 2010 August 04–05  
Siskiyou County: Hwy 263 north of Yreka 2010 August 04–05.

Rentz and Birchim (1970) indicate that this katydid is mainly nocturnal but has been found active during the daytime. I have only encountered this species on quiet roads at night. All the records indicated above were obtained between 8:30 pm and midnight.

Species from three other genera of flightless shield-backed katydids can be found in the border area—*Idiostatus*, *Neduba* and *Steiroxys* (*Capnobotes* and *Tessellana* are also present but these can fly). Compared to the species in these genera, the quadrate cerci of the male of *Idionotus siskiyou* (Figure 3) are unique. The coloration of *Idiostatus siskiyou* is also fairly distinctive. In his original description Hebard (1934 p. 49) writes: “General coloration very dull cinnamon buff with numerous microscopic and inconspicuous flecks of dark brown on all but dorsum of head, lateral lobes of pronotum and limbs.” Many shield-backed species show color or color pattern variations, however, and *Idionotus siskiyou* is no exception. Figure 4 provides examples of the color

variation found in this species. Both exhibit a broad paler stripe down their backs; some individuals like the ones in Figure 2 and Figure 4b also have a faint, open diamond pattern on top of their abdomens. (The only other local species that I have seen with similar colors are *Idiostatus inermis* [Unarmed Shieldback] which overlaps *Idionotus siskiyou* at least in Siskiyou County, California, and some individuals of *Neduba*.)

The shape of the pronotal shield of *Idionotus siskiyou* is fairly distinctive (Figure 5) compared to other local species. While females are often harder to identify, the combination of color pattern and shield shape allow one to identify these females with confidence. As indicated earlier the cerci of the males are unique.

Our katydids are interesting insects deserving of more study.

## References

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Figure 5: Dorsal views of the shields of flightless shield-backed katydids from southern Oregon. From Left to Right: *Idionotus siskiyou* (female. Note the shape of the top of the shield—noticeable constriction, raised edge along the posterior lateral margins, curve at the corner of this margin); *Idiostatus gurneyi* (female, Mount Ashland, Jackson County, Oregon. Note the lack of a sharp edge at the waist of the shield and its overall shape; the shield of this species has a central ridge, but the other local *Idiostatus* species do not.); *Steiroxys probably borealis* (male, Lava Beds National Monument, Siskiyou County, California. While not obvious at this angle, the shield has a central ridge and the top of the shield bends down sharply at the edges.); *Neduba* sp. (female, Forest Road 13, Siskiyou County, California. Note the shape of the shield and the broad flared posterior margin.) The colors/color patterns shown are not unique for each species.