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First Record of the Gulf Coast Tick, Amblyomma maculatum, from the Lark Bunting, Calamospiza melanocorys

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On 16 Dec 2006, we removed a single engorged ixodid tick from the head of an adult female Lark Bunting, *Calamospiza melanocorys*, that had been captured accidentally in a Museum Special snap trap baited with peanut butter and rolled oats to collect small mammals. The capture site was located on a tract of land north of U.S. Highway 90, approximately 2 km east of Alpine, Brewster County, TX. This land is grazed by cattle, and the desert scrub vegetation is characterized by grasses (Poaceae), mesquite (*Prosopis glandulosa*), cactus (*Opuntia* spp.), yucca (*Yucca* spp.), fendlerbush (*Fendlera* sp.), and agarito (*Mahonia trifoliolata*). The specimen was shipped to Richard G. Robbins, who identified it as a nymph of *Amblyomma maculatum*, the so-called Gulf Coast tick, which in North America chiefly occurs along the Gulf Coast and in the southern Atlantic coastal states. Adults parasitize a variety of large wild and domestic mammals (Keirans and Litwak 1989); immature stages (nymphs, larvae) feed on small- to medium-sized mammals, but also on ground-frequenting birds, sometimes accompanying the latter on migrations as far north as southern Canada (Keirans and Durden 1998). A thorough search of the literature has revealed that our specimen of *A. maculatum* is the first to have been recorded from Lark Bunting.

The Lark Bunting feeds and nests on the ground, breeds in plains, prairies, meadows, and sagebrush, and winters in cultivated or brushy areas and deserts (Shane 2000). It should, therefore, be parasitized by any of numerous North American ticks specific to small mammals and lagomorphs, its ecological associates (Cooley and Kohls 1945, Cooley 1946, Rainwater et al. 2007). However, we have found only one brief reference to tick parasitism of this bird: a single larva of the Rocky Mountain wood tick, *Dermacentor andersoni*, that was removed from one of four Lark Buntings examined for ticks on the grounds of the Idaho National Laboratory (formerly the National Reactor Testing Station) in southeastern Idaho (Allred 1968).

Amblyomma maculatum commonly parasitizes a great variety of ground-foraging birds, including members of the families Corvidae, Emberizidae, Icteridae, Laniidae, Mimidae, Odontophoridae, and Troglodytidae (Hixson 1940, Durden et al. 2001). Surprisingly, Lark Bunting is only the third North American emberizid from which *A. maculatum* has been recorded. We hope that our novel collection will prompt additional investigations of the ectoparasite fauna associated with the Lark Bunting, a bird that appears to be declining in concert with its open-country habitats.

In summary, the Gulf Coast tick, *Amblyomma maculatum*, is reported from the Lark Bunting for the first time. Only one other tick species, the Rocky Mountain wood tick, *Dermacentor andersoni*, is known from this bunting, a ground-nesting bird that should theoretically support a diverse tick fauna.

We thank Lewis Medlock for assisting us with trapping. Our Lark Bunting specimen has been assigned accession number CUSC 4016 and deposited in the Clemson University Museum of Natural Sciences. Our tick specimen has been assigned accession number YPM-ENT 300690 and deposited in the Division of Entomology, Peabody Museum of Natural History, Yale University, New Haven, CT.

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Using Alulas and the Carpal Covert to Assess Age in Some Formative and First Alternative Plumaged Western Passerines

Most oscines and suboscines go through an incomplete or partial preformative molt (Mulvihill 1993). The incomplete or partial nature of the preformative molt provides recognizable and repeatable age-related criteria for field biologists (Wolfe et al. 2010). During the preformative molt, oscines and suboscines typically replace first the lesser and median coverts, then a few feathers to the entire tract of greater coverts, and perhaps, a few tertials and/or center retrices (Froehlich 2003). The preformative molt is often concluded after replacing the last greater covert creating a molt limit (i.e. boundary between replaced and retained feathers) between greater coverts and primary coverts. Additionally, many warblers, vireos, and sparrows exhibit a preformative molt which continues replacement through the carpal covert and into the lesser alula and, perhaps, the greater alula (Pyle 1997b). Variability in covert and alula replacement within a species, or an individual bird, depends upon a number of factors including weather, nutrition, and hatching date (Mulvihill 1993, Mulvihill and Winstead 1997, Bojarinova et al. 1999, Flannery and Gardali 2000).

Eastern banding operations (e.g., Powdermill Avian Research Center) noted that molt limits within the carpal covert and alula tract are easily recognizable and use them to identify formative and first alternate plumages (M. Lanzone pers. comm.) Despite eastern advances in recognizing and utilizing carpal covert and alula tract molt limits, many western banding operations apparently continue to rely primarily upon contrast between primary and greater coverts as the definitive molt limit for many warblers, vireos, and sparrow species (Pyle 1997a). Pyle (1997a) states that alula tracts and the carpal covert are "parallel" with greater coverts, as it pertains to age categorization and are subsequently rarely discussed within species accounts (Pyle 1997b). Thus, the uses of