## A MODERN LA BREA TAR PIT.

## BY A. E. BORELL.<sup>1</sup>

ON SEPTEMBER 26, 1934, my attention was called to a tar pit in which a number of birds had been trapped. The pit was located one mile southwest of the village of Grand Canyon, on the south rim of Grand Canyon, Coconino County, Arizona, and had been placed there during the building of the Hermit Rim Road. There proved to be one main pit about twenty feet in diameter and four smaller ones formed by seeps from the main pool.

At first sight there seemed to be only a few birds in the tar but closer observation showed many more. Some had disappeared completely, leaving only the outline of the bird on the surface. Bodies were in all stages of decomposition from skeletons to those recently dead.

On September 26, I counted 123 individuals and was able to identify 13 species as follows:

Rocky Mountain Grosbeak (Hedymeles melanocephala papaga), 1.

Mexican Crossbill (Loxia curvirostra stricklandi), 18.

Band-tailed Pigeon (Columbia f. fasciata), 1.

Cooper's Hawk (Accipiter cooperi), 1.

Chestnut-backed Bluebird (Sialia mexicana bairdi), 2.

Lewis' Woodpecker (Asyndesmus lewis), 9.

Natalie's Sapsucker (Sphyrapicus varius nataliae), 4.

White-breasted Woodpecker (Dryobates villosus leucothorectis), 1.

Western Chipping Sparrow (Spizella passerina arizonae), 3.

Green-tailed Towhee (Oberholseria chlorura), 1.

Western Vesper Sparrow (Pooecetes graminens confinis), 2.

Gambel's Sparrow (Zonotrichia leucophrys gambeli), 2.

Long-crested Jay (Cyanocitta stellata diademata), 1.

Large Hawks, 5.

Jays and Woodpeckers (unidentified), 7

Small birds (unidentified), 65

Immediately steps were taken to have the pit covered with earth and several truck loads were hauled. However, the large pit proved to be deeper than expected and the fresh oil from beneath soon came to the surface and oozed out beneath the earth covering. On October 26, I again visited the pits and found eight new birds as follows:

Western Evening Grosbeak, (Hesperiphona vespertina brooks;) 4.

Northern Pine Siskin (Spinus p. pinus), 3.

Cassin's Purple Finch (Carpodacus cassini), 1.

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On learning that the pits were still deadly, many more truck loads of dirt were hauled and piled on and around them. It was then thought that our troubles were over. However, on April 2, 1935, I found that tar was again beginning to seep out beneath the cap of earth, and more dirt had to be supplied.

This brought out two points. First, that tar remains sticky enough to trap birds even during comparatively cold weather. Second, that such a tar pit demands repeated treatments in order to cover up the tar which continues to seep out.

Although the oil-soaked birds presented a pitiful sight, they were interesting from several standpoints. In most cases birds of one species were grouped in very small areas, apparently all having been trapped at approximately the same time. Eight of the nine Lewis' Woodpeckers were within a radius of three feet. Four of these had their heads resting on floating boards, suggesting that the birds had made a dying effort to keep their heads above the tar. Most of the Crossbills were in three distinct groups, several of the birds touching each other. This apparently indicates that when one bird was caught, others of the same species flew down to it, either out of curiosity or thinking that the first bird had found water or food.

One species found in the tar proved to be comparatively rare. Previously the Lewis' Woodpecker has been recorded only twice from the South Rim.

The Hawks probably were caught while endeavoring to capture the fluttering birds or in trying to feed on the dead ones.

One spotted night snake (first record for the South Rim) and several dragon flies, butterflies, and other insects were also victims of the tar. Possibly some of the birds were trapped while trying to recover the insects. My observations led me to believe that birds are engulfed rapidly when caught during warm weather when the tar is fluid.

Mr. Jack Tooker, who has been in the region for many years, said that several years ago he helped pull deer and cattle out of this pit.

This article is written primarily to call attention to a type of conservation that can be done by people interested in birds. Crude oil is sometimes permitted to stand along oiled roads, about oil wells or refineries, along railroads or around city dumps. Often this is merely waste oil. If everyone interested in wildlife were to keep this in mind and investigate places where tar pits are likely to occur, I believe that many death traps and potential traps would be found.

As mentioned above, it is not always easy to eliminate a tar pit. However, I believe that usually enough pressure could be brought to force the owner, or agency responsible, to correct the condition. Burning is the simplest where this is possible, otherwise the tar can be covered with earth, or a screen or board covering made for the pit. Where earth is used, it will be necessary to inspect the pit occasionally to cover any oil which may be seeping out. Even small seeps are dangerous as fresh oil need be only a fraction of an inch thick in order to trap and hold small birds.

In the warmer climates, tar may be fluid enough to be dangerous for eight or nine months out of the year. Since 123 birds were found at one time in the pit described above and eight more a month later, we can appreciate the great numbers which may be destroyed during a period of several years or even during a single year.

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