BIRD TRACKS FROM THE MID-MIOCENE SIEBERT FORMATION NEAR TONOPAH, NEVADA

Bonham and Garside (1979, p. 64, fig. 41) briefly described fossil bird tracks in fine-grained, light-gray, tuffaceous shales exposed about 5 km west of Tonopah, Esmeralda County, Nevada. Ripple marks, and raindrop impressions are preserved on the bedding surfaces. Chara (fossil algae) was also observed.

Figure 41 from Bonham and Garside (1979)

Avipeda sp.
Dimensions: ~50 mm long, 65 mm long (length is distance between heel, if no hind toe impression) and top of middle toe; width is distance between tips of first and third #2 and #4).
Total number of tracks measured:4
Number of tracks in trackway: 6

Description: Medium-sized tracks with central toe slightly longer than toes on each side. Outside toe obviously curved. Side toes are at approximately 75º, with central toe approximately bisecting that angle. Angle determined using midpoint of curving outside toe. Stride approximately 160 mm (stride is one full cycle of motion, e.g., distance from heel of foot to heel of same foot when it touches the ground). No hallux impressions. No webbing observed, but such impressions may not be preserved. Curved outside toe is reminiscent of some modern ducks.
Location: 4213860N, 474722E, NAD 27, approx. location.
Geologic unit: Siebert Formation, ca. 16 Ma.


Ripple-marked surface with trackway; from slide. .

Avipeda sp.
Dimensions: ~45 mm long, 45 mm wide (length is distance between heel, if no hind toe impression) and top of middle toe; width is distance between tips of first and third (#2 and #4)
Total number of tracks measured: 4
Number of tracks in trackway: 7
Description: Medium-sized tracks with central toe slightly longer than straight toes on each side. Central toe curves inward slightly toward the midline of trackway. Side toes are at approximately 90º, with central toe approximately bisecting that angle. Pace 70-90 mm; alternating tracks turn inward slightly. (pace is one step, stride is full cycle of motion, e.g., distance from heel of foot to heel of same foot when it touches the ground).

No hallux impressions. Some modern sandpipers, for example, are size-appropriate for making such tracks.
Location: 4213860N, 474722E, NAD 27, approx. location.
Geologic unit: Siebert Formation, ca. 16 Ma.

References

Bonham, H.F., Jr., and Garside, L.J., 1979, Geology of the Tonopah, Lone Mountain, Klondike, and northern Mud Lake Quadrangles, Nevada: Nevada Bureau of Mines and Geology Bulletin 96, 68 p.