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A new species of pine anole from the Sierra Madre del Sur in Oaxaca, Mexico (Reptilia, Squamata, Dactyloidae: *Anolis*)

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Abstract

We describe the new species *Anolis peucephilus* sp. nov. from the Pacific versant of southern Mexico. *Anolis peucephilus* differs from all congeners by having a combination of (1) smooth ventral scales; (2) usually a patch of three greatly enlarged supraocular scales; (3) extremely short hind legs, longest toe of adpressed hind leg reaching to a point between levels of axilla and ear opening, ratio shank length/snout-vent length 0.18–0.21; (4) circumnasal usually in contact with first supralabial; and (5) a large yellowish orange dewlap in males and a very small to small white dewlap in females. In external morphology, *A. peucephilus* is most similar to *A. omiltemanus* from which it differs by having even shorter hind legs with the longest toe of adpressed hind leg reaching to a point between levels of axilla and ear opening (versus usually to ear opening, occasionally to slightly beyond ear opening or to a point between shoulder and ear opening in *A. omiltemanus*), a slightly larger dewlap in females, to 64 mm² (versus to 41 mm² in *A. omiltemanus*), the circumnasal usually in contact with the first supralabial (versus those scales separated by the presence of a subnasal in *A. omiltemanus*), and 4–6 internasal scales in the new species (versus usually 6–7 in *A. omiltemanus*). Furthermore, *A. peucephilus* differs from *A. omiltemanus* in hemipenial morphology (no finger-like processus on asulcate side in *A. peucephilus* versus such a processus present in *A. omiltemanus*). Also, in a preliminary molecular genetic analysis of the mitochondrial CO1 gene fragment, *A. peucephilus* has a genetic distance of 11.5% from *A. omiltemanus*. *Anolis peucephilus* was collected at night while the lizards were sleeping in pine trees, 2–10 m above the ground.

Key words: *Anolis peucephilus* sp. nov.; Dactyloidae; Mexico; new species; Oaxaca; Reptilia; Squamata

Resumen

Describimos la nueva especie *Anolis peucephilus* de la vertiente Pacífico del sureste de México. *Anolis peucephilus* difiere de todos sus congéneres al tener una combinación de (1) escamas ventrales lisas; (2) usualmente un parche de tres escamas supraoculares fuertemente agrandadas; (3) patas traseras extremadamente cortas, el dedo más largo de la pata trasera presionado paralelo al cuerpo alcanza un punto entre el nivel de la axila y la apertura timpánica, proporción de la longitud de la pierna/longitud hocico-cloaca 0.18–0.21; (4) circumnasal usualmente en contacto con la primera supralabial; y (5) presencia de un gran abanico gular amarillo naranja en machos y un pequeño abanico gular blanco en hembras. En morfología externa, *A. peucephilus* es más similar a *A. omiltemanus* con el cual la diferencia es la presencia de patas traseras aún más cortas, con el dedo más largo de la pata trasera alcanzando un punto entre el nivel de axila y la apertura timpánica (versus usualmente alcanzando la apertura timpánica y ocasionalmente ligeramente más allá de ella o entre ella y el hombro en *A. omiltemanus*), un abanico gular mas grande en hembras, hasta 64 mm² (versus hasta 41 mm² in *A. omiltemanus*), la circumnasal usualmente en contacto con la primer supralabial (versus aquellas escamas separadas por la presencia de una subnasal en *A. omiltemanus*), y 4–6 escamas internasales (versus 6–7 en *A. omiltemanus*). *Anolis peucephilus* también se diferencia de *A. omiltemanus* en la morfología de los hemipenes (sin proceso en forma de dedo en lado asulcado en *A. peucephilus* versus tal proceso presente en *A. omiltemanus*). Además, en un análisis preliminar de genética molecular de un fragmento del gen mitocondrial CO1, *A. peucephilus* presenta una distancia genética de 11.5% de *A. omiltemanus*. Los individuos de *A. peucephilus* fueron colectados de noche mientras dormían en pinos, entre 2–10 metros sobre el suelo.

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Appendix 1

Comparative Specimens Examined

- Anolis dunni*—**Mexico**: Guerrero: Acahuizotla: KU 87309, MCZ R-78696–98, USNM 47753; Agua de Obispo: FMNH 116751, IBH 26591–92, KU 87306–08, MCZ R-78722–23, SMF 96194, 96371–72, 96379–81; near Agua de Obispo, Km 350–351: UIMNH 20125; Chilpancingo: SMF 96238–39; Malpais, S of Chilpancingo: UIMNH 20126; Petaquillas near Chilpancingo: IBH 26589–90, SMF 96252–54; 1 mi SW Colotlipa: MCZ R-78719–21; Presa El Molino near Tixtla: IBH 26611, 26594, SMF 96255–56; 7.1 mi S Puerto Gallo: UMMZ 130983; 19.2 mi S Puerto Gallo: UMMZ 130984; 8.6 mi (by road) N from San Vicente: UTA R-4178.
- Anolis gadovii*—**Mexico**: Guerrero: near Palo Gordo: IBH 26585, 26610, SMF 96195–96; Tierra Colorada: FMNH 106101, 106106, 114445, 114448, 114450–57, MCZ R-39707, R-93669, UIMNH 20107–10, 20129–30, 57204–06, 57209, 57212, 57214, 57216, 57219, 57224–26, 57228, 57230–31, UMMZ 81953.
- Anolis liogaster*—**Mexico**: Guerrero: 17.2 mi W Asoleadero: UMMZ 130982; Pueblo los Morros, 62.8 km from Zumpango del Rio via Casa Verde: UMMZ 229862, 229867; W of Chilpancingo, between the villages Filo de Caballo y Carrizal: UMMZ 229869; 37.7 km SW Filo de Caballo: KU 182540–42; Omiltemi: FMNH 108508, 125620–21, 125624, IBH 26599–601, 26605–06, MCZ R-85021–22, SMF 96199–206, USNM 47748–51, 148865; 1.4 mi W Patio de Aviacion: UMMZ 130981.
- Anolis macrinii*—**Mexico**: Oaxaca: Cafetal Santa Hedvigis near Pochutla: MCZ R-46202, UIMNH 78762; Carretera Pochutla-San José Pacífico: ENS 12012, 12022 (MZFC uncatalogued); Copalita: SMF 96209; Desviación a molino de piedra Juquilita: MZFC 22631; Pluma Hidalgo: MZFC 16565; near Pluma Hidalgo: SMF 96387; Río Eureka, Pluma Hidalgo: MZFC 22636; Santiago la Galera: IBH 26577, IBH 26580, 26583, SMF 96207, 96210; Sierra Madre del Sur, Santiago La Galera: MZFC 16425; Taquería Santiaguita: SMF 96208; near Tierra Blanca: SMF 96388.
- Anolis omiltemanus*—**Mexico**: Guerrero: 15 mi W Asoleadero: UMMZ 130985; La Laguna near Omiltemi: IBH 26554–57, 26559; SMF 96226–30; 0.5–1.0 m S Omiltemi: UTA R-4408; 1.0 mi E Omiltemi: UTA R-4409; 2 mi W Omiltemi: MCZ R-78717; 1.5 km E Omiltemi, Chilpancingo de Los Bravo: MZFC 2825; Omiltemi, Barranca de Potrerillos, Chilpancingo de Los Bravo: MZFC 2826–27, 2829; Omiltemi, Chilpancingo de Los Bravo: MZFC 3066–67; Omiltemi, Cueva del Borrego, Chilpancingo de Los Bravo: MZFC 2813; Plan de Potrerillos, 2 km E Omiltemi, Chilpancingo de Los Bravo: MZFC 2814–15, 2830–31, 2833; Plan de Potrerillos, 2.5 km E Omiltemi, Chilpancingo de Los Bravo: MZFC 2828, 2832; 1 km E Omiltemi, 28 km W Chilpancingo: POE 3817 (MZFC uncatalogued); 21 km W Chilpancingo, road to Omiltemi: POE 3819, 3821, 3827, 3829 (MZFC uncatalogued); 38 km W Milpillas/Casa Verde: POE 3786–87, 3789–90 (MZFC uncatalogued); 14 km E Mazatlan: MVZ 106304–06.
- Anolis taylori*—**Mexico**: Guerrero: Acapulco: USNM 132358–61; Acapulco, Jardín Botánico: IBH 26597, 26602–03, SMF 96268–74; Acapulco, zona arqueológica Palma Sola: IBH 26595–98, 26604; mountains near Acapulco: FMNH 116741–43, 116746–48, 116750, 116752, 116754–56, 116759, 116762–65, 116767, MCZ R-58225–26, UIMNH 20099, 200101–02, 200104, 200106; 0.5 mi S Las Cruces: KU 320889–93; 1 mi W Puerto Marqués: KU 320902–08.