



Fallicambarus (F.) wallsi (Decapoda: Cambaridae), a new burrowing crayfish from eastern Texas

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Abstract

Fallicambarus (F.) wallsi is described from San Augustine and Sabine counties, Texas. It may be distinguished from its nearest relative, *F. (F.) kountzeae*, by its distomesially oriented proximal margin of the cheliped's palm mesial to the condyle; proportionately longer mesial margin of the palm; lack of a distinct excision on the dactyl's opposable margin; more strongly tapering mesial process and absent or reduced cephalic process of the first pleopod of the first form male; and proportionately broader mesial ramus of the uropod, antennal scale and areola.

An identification key is provided for the subgenus *Fallicambarus*.

Key words: crawfish, crawdad, species descriptions

Introduction

In the spring of 2008, I collected numerous juvenile crayfish of the subgenus *Fallicambarus* from six sites in San Augustine and Sabine counties, Texas. Although apparently indistinguishable from *F. (F.) kountzeae* (Johnson, 2008), I suspected that they might belong to an undescribed species because of their isolated distribution. Of these juveniles, a single male was successfully raised to first form. This specimen lacks a cephalic process of the first pleopod, which is always present in *F. (F.) kountzeae*. Motivated by the discovery of this potentially significant morphological difference, additional fieldwork was conducted at and near the previously visited sites in 2010. Five adults were excavated from burrows (none of which were first form males), numerous juveniles were collected from temporary pools and the number of sites was expanded to 16. Eight additional males were raised to first form. Comparisons of these specimens with a large *F. (F.) kountzeae* series identified a wealth of distinguishing characters. A description of the crayfish as a new species is thus offered herein.

The most recent complete treatment of subgenus *Fallicambarus* was by Hobbs (1989). Since then two additional members, *F. (F.) kountzeae* and *F. (F.) houstonensis* (Johnson, 2008), have been described.

Fallicambarus (F.) wallsi, new species

SABINE BURROWING CRAYFISH

Figs 1–6, Tables 1–2

Diagnosis. Body pigmented, eyes well developed. Rostrum of adults devoid of marginal spines. Antennal scale approximately 2.1 times as long as broad. Areola width 2.1 to 5.2 (mean 3.9 ± 1.0) percent of length. Branchiostegal spine present. Cheliped without sufflamen; ventral surface of merus with mesial and lateral rows of tubercles; length of carpus less than width of palm of chela. Chela ungaping, lateral margin subserrate, ventrolateral surface lacking arched row of prominent setiferous punctations; opposable margin of dactyl lacking distinct excision in basal half, mesial margin with tubercles along proximal half; “dactyl/palm mesial margin” length ratio ranges from 1.45 to 1.57, mean 1.51 ± 0.04 ; proximal margin of palm oriented distomesially mesial to condyle. Mesial surface of palm of chela of second pereopod lacking conspicuous tufts of plumose setae. First pleopod with proximomesial