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T. D. A. Cockerell  
*University of Colorado*

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THE PANURGINE BEES OF THE GENERA  
HESPERAPIS, ZACESTA AND PANURGOMIA

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T. D. A. COCKERELL

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# THE PANURGINE BEES OF THE GENERA HESPERAPIS, ZACESTA AND PANURGOMIA.

By T. D. A. COCKERELL,

University of Colorado, Boulder, Colorado.

The genus *Hesperapis* Ckll., 1898, was based on *H. elegantula* Ckll. from New Mexico. At the present time seven species are assigned to it, the range of the genus being from New Mexico to Southern California. The following table separates the known forms:

Thorax above with moss-like ochraceous hair; abdomen dull ferruginous.....	<i>elegantula</i> Ckll.
Thorax with ordinary pubescence; abdomen not red .....	1
1. Area of metathorax dull, or only the apical part shining.....	2
Area of metathorax polished and shining.....	3
2. Mesothorax strongly and closely punctured, somewhat shining; male about 11.5 mm. long.....	<i>eumorpha</i> (Ckll.)
Mesothorax and scutellum shining, polished, finely punctured; male a little over 6 mm. long.....	<i>nitidula</i> Ckll.
Mesothorax and scutellum dull, not evidently punctured	<i>semirudis</i> Ckll.

3. Wings perfectly clear . . . . . *larrea* Ckll.  
 Wings brownish . . . . . 4
4. Wings milky at apex; legs of male wholly black . . . . *olivæ* Ckll.  
 Wings not milky at apex; male tarsi variably reddish  
*rhodocera* Ckll.

The description of ♀ *rhodocera*, as originally given (*Panurgus rhodocera*, Trans. Am. Ent. Soc., XXIV, p. 148), included the ♀ of *H. olivæ*, which is separable with difficulty. The males are more distinct and the ♂ *rhodocera* may be regarded as the type. Both species visit the flowers of *Pectis* in September.

*Zaceta* Ashmead, 1899, was described as a member of the Osmiinae, but Titus (Jn. N. Y. Ent. Soc., XII, p. 26) showed that it was a Panurgid. It comes from Los Angeles County, Cal., and is known only in the male. Examining the type of *Z. rufipes* Ashm. in the U. S. National Museum, I found that it closely resembled *Hesperapis* as typified by *H. elegantula*. The following characters are noteworthy:

- (1) The moss-like ochraceous hair on thorax above, as in typical *Hesperapis*.
- (2) The narrow face and essentially parallel orbits, as in *H. elegantula*.
- (3) The orange flagellum, as in *H. elegantula*, but the scape shorter and stouter (sexual character?).
- (4) Clypeus has a broad yellow apical band, not seen in *Hesperapis* (but male of *H. elegantula* is unknown).
- (5) Compared with *H. elegantula* has larger, shining, area at base of metathorax.
- (6) Venation is as in *H. elegantula*, except that second submarginal cell is longer, and the lower section of basal nervure descends much less abruptly.
- (7) The pygidial plate is long and narrow.
- (8) Titus has described the palpi of *Zaceta*; the first three joints of labial palpi are nearly equal whereas in *H. elegantula* the first is nearly as long as 3 plus 4, the second somewhat shorter than the first.

*Hesperapis*, as interpreted above, consists of at least two very distinct groups, one typified by *H. elegantula* (type of genus), and the other containing the remaining species. *Zaceta* is per-



haps closer to *H. elegantula* than it is to the other species assigned to *Hesperapis*, and its rank as a genus appears doubtful. I think we must call it *Hesperapis (Zacesta) rufipes* (Ashm.).

*Panurgomia* Viereck, 1909, was based on *P. fuchsi* Viereck, from Arizona. The unique specimen, a female, was unfortunately in bad condition. Mr. J. C. Crawford recently wrote me (February, 1916) that he considered the genus identical with *Hesperapis*, and the type species at least extremely close to *H. eumorpha* Ckll. This led me to reexamine the type, and I found that it possessed the essential characters, so far as could be seen, of the group of *Hesperapis* which includes the majority of the species. The entirely dull area of metathorax agrees with the minor group of *H. eumorpha*, etc. The stigma is too large for typical *Hesperapis*. The clypeus is large, strongly convex, polished and shining. Hence it appears that *Panurgomia* is a valid subgenus (or genus?) for the group of *Hesperapis* which excludes the typical species.

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