

# New Crayfishes (Decapoda: Parastacidae: *Euastacus*) from Northeastern New South Wales, Australia

JASON COUGHRAN

School of Environmental Science and Management,  
Southern Cross University, Lismore NSW 2480, Australia  
jcoughra@bigpond.net.au

**ABSTRACT.** Routine astacological surveys in northeastern New South Wales have revealed four new species of crayfish. Three species are allied to the “*setosus* complex”, a group of small and poorly spinose *Euastacus* previously recorded only from Queensland: *E. girurmulayn* n.sp. from the Nightcap Range, *E. guruhgi* n.sp. from the Tweed volcanic plug and *E. jagabar* n.sp. from the Border Ranges. These three species are differentiated chiefly on features of the sternal keel, spination and antennal squame. *Euastacus dalagarbe* n.sp., recorded from the Border Ranges, has affinities with a growing group of crayfish displaying morphological traits intermediary between the *setosus* complex and more characteristically spinose *Euastacus*. It differs markedly in spination of the chelae, and in the nature of the lateral processes of the pereopods. All of these taxa occur in association with the much larger and more spinose *E. sulcatus*. An unusual crayfish specimen of uncertain status is also discussed.

COUGHRAN, JASON, 2005. New crayfishes (Decapoda: Parastacidae: *Euastacus*) from northeastern New South Wales, Australia. *Records of the Australian Museum* 57(3): 361–374.

Recent taxonomic revision of the genus *Euastacus* (Morgan, 1986, 1988, 1997) resulted in both the description of several new species and synonymies of others, including the synonymy of the genus *Euastacoides* (Riek, 1956) with *Euastacus*. Together with a new species of *Euastacus*, *E. jagara*, the genus *Euastacoides* was designated by Morgan (1988) as a group of small, poorly spinose *Euastacus* (the “*setosus* complex”), not sufficiently different to warrant recognition at the generic level. Moreover, Morgan (1988, 1997) pointed out that several species bear intermediary traits between the *setosus* complex and those of the genus generally, strengthening this synonymy.

Historically there has been a paucity of sampling in the northeastern New South Wales area, resulting in few sites of taxonomic record for the three species of *Euastacus* known from the area: *E. gumar* (two proximal sites), *E. sulcatus* (two sites) and *E. valentulus* (several sites). These three species are

distinct from the *setosus* complex, being medium to large in size and of moderate to strong spination. Recently, increased sampling in the region extended the distribution of *E. gumar* and *E. sulcatus* and revealed a further species, *E. mirangudjin*, morphologically intermediate between the *setosus* complex and *Euastacus* generally (Coughran, 2002).

The current paper describes four new species of *Euastacus* discovered during continued surveys of the region, one of which, *E. dalagarbe* n.sp., also bears characteristics intermediate in nature. The remaining species, *E. girurmulayn* n.sp., *E. guruhgi* n.sp. and *E. jagabar* n.sp., are allied to the *setosus* complex itself. A key to all species of *Euastacus* found in southeastern Queensland and northeastern New South Wales is provided. An unusual specimen collected during the research, which displays some characteristics of *Euastacus* yet differs markedly in structural morphology, is also discussed.