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On pp. 34-36 of Bulletin 10, U. S. Geological Survey, I have spoken of the relations of the genera *Ptychoparia*, *Crepicephalus*, &c., stating that *Crepicephalus* might be used as a subgenus on account of its peculiar pygidium. The projecting postero-lateral spines of the pygidium are also present in other genera of trilobites, but not just in the same way. The nearest I know of is the pygidium of *Ceratopyge forficula* Sars (Die sil. Etagen 2 und 3, &c.; W. C. Brögger, 1882, pl. iii, figs. 19-22), where the spines are the extension beyond the border of the second anchylosed segment of the central axis. The head of this species is entirely distinct from that of *P. (C.) Iowensis*. We now have, in the Geological Survey collections, three well-marked species of the group; one from the Potsdam horizon is represented by entire specimens, some of which have a length of 15^{cm} (5⁷/₈ inches), exclusive of the two postero-lateral spines of the pygidium, which give an entire length of 20^{cm}. This is the largest species of the *Conocephalidæ* that is known to me. It will be illustrated in the study of the Upper Cambrian faunas.

CREPICEPHALUS LILIANA n. sp.

Plate xxviii, figs. 3, 3a-c.

Head semicircular in outline and terminating in round, sharp, postero-lateral spines of moderate length. Glabella truncato conical, tapering moderately to the front, height and width at the occipital furrow about equal; marked by three pairs of furrows; the two posterior extend obliquely inward and backward and the anterior pairs are nearly transverse in direction; the anterior pair is often very faintly indicated, and on the glabellas of young individuals, 2^{mm} or 3^{mm} in length, the furrows show only as faint depressions on the smooth surface; occipital furrows broad and well defined; occipital segment strong and moderately elevated; dorsal furrows distinct.

Fixed cheeks broad as the glabella opposite the eyes; posteriorly they broaden out in the short postero-lateral limbs, and anteriorly merge into the frontal limb, which is of moderate width, slightly convex, and bordered anteriorly by a flattened margin about as broad as the distance from the front of the glabella to the slight but distinct depressions between the frontal limb and the margin; postero-lateral limbs grooved near the posterior margin by a distinct furrow. Eyes lunate, about one-third as long as the length of the glabella; a strong ocular ridge extends from the anterior end of the narrow palpebral lobe with a slightly forward direction, touching the dorsal furrow nearly, but not quite, opposite the antero-lateral angle of the glabella. Facial sutures cut the anterior margin on a line with the sides of the glabella, and extend obliquely inward and outward across the margin and then curve inward and extend to the eye; curving around the palpebral lobe, they extend obliquely outward with a slightly sigmoidal course to the posterior margin. The associated free cheek is irregularly triangular; mar-