

Electronic Supplementary Material 1 (Fig. S1-S7)

Material heterogeneity of male genitalia reduces genital damage in a bushcricket during sperm removal behaviour

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Fig. S1. Genital damage in 23 individual males of *Metaplastes ornatus*. The colour differences in the labels represent their collection sites, i.e. black ones in Paleokastro, central Greece (Nomos Fthiotis), and white ones were collected a few km north of the village of Vitoli, central Greece.

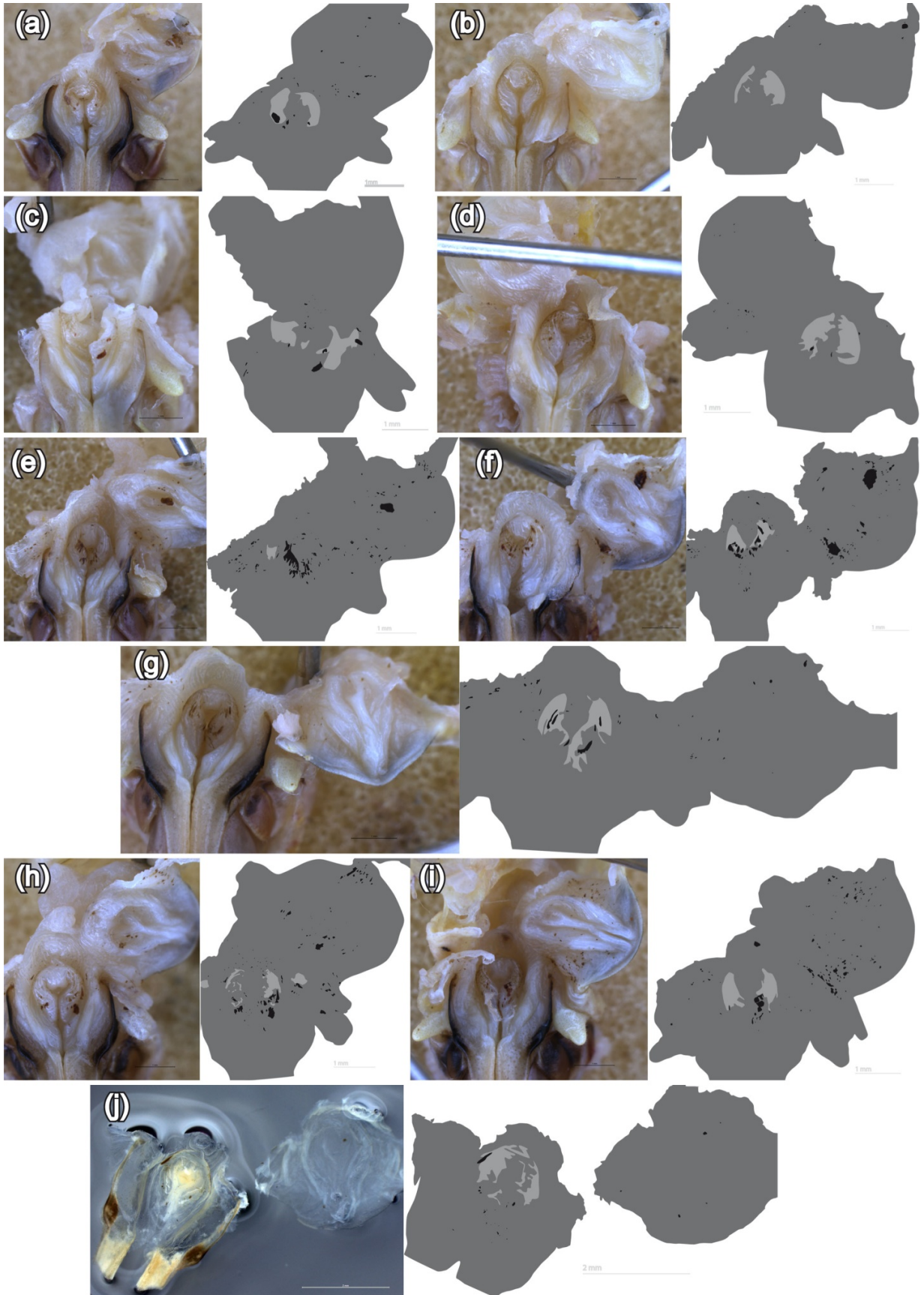


Fig. S2. Genital damage in 23 individual females of *Metaplastes ornatus*. The colour differences in the labels represent their collection sites, i.e. black ones in Paleokastro, central Greece (Nomos Fthiothis), and white ones were collected a few km north of the village of Vitoli, central Greece.

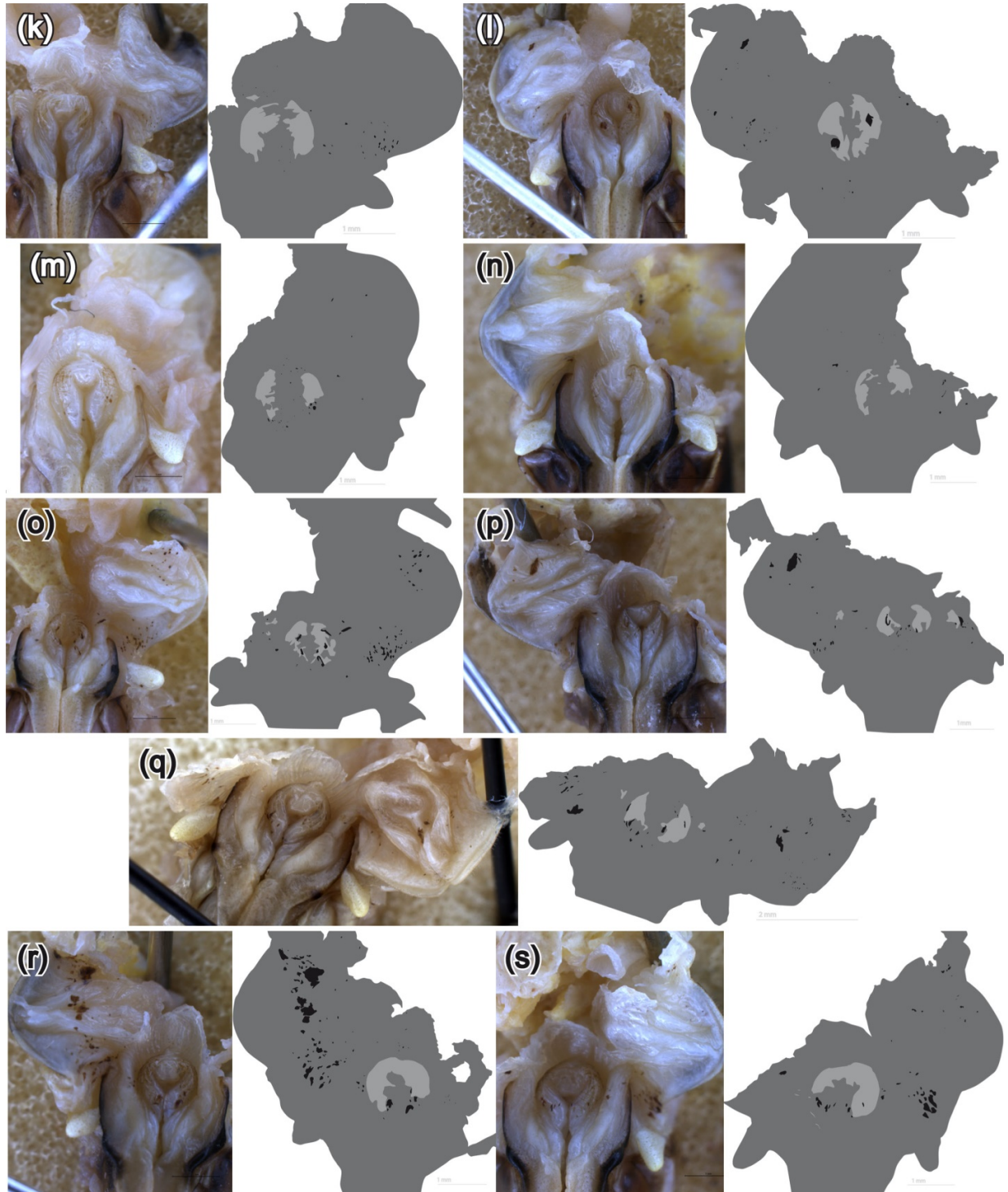


Fig. S2. (cont.)

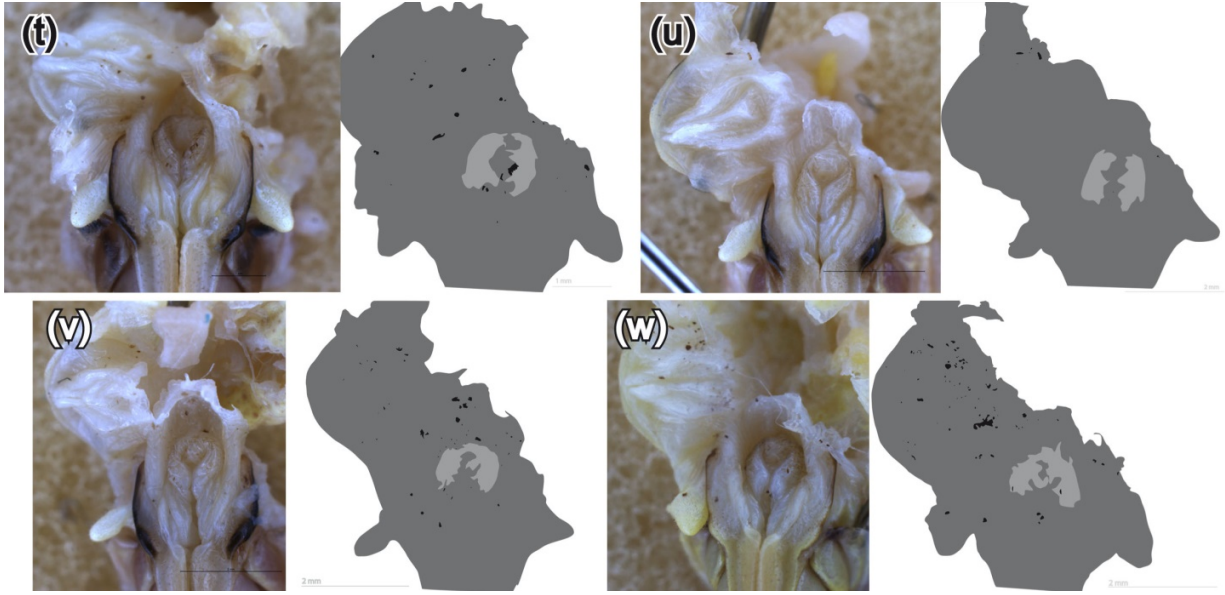


Fig. S2. (cont.)

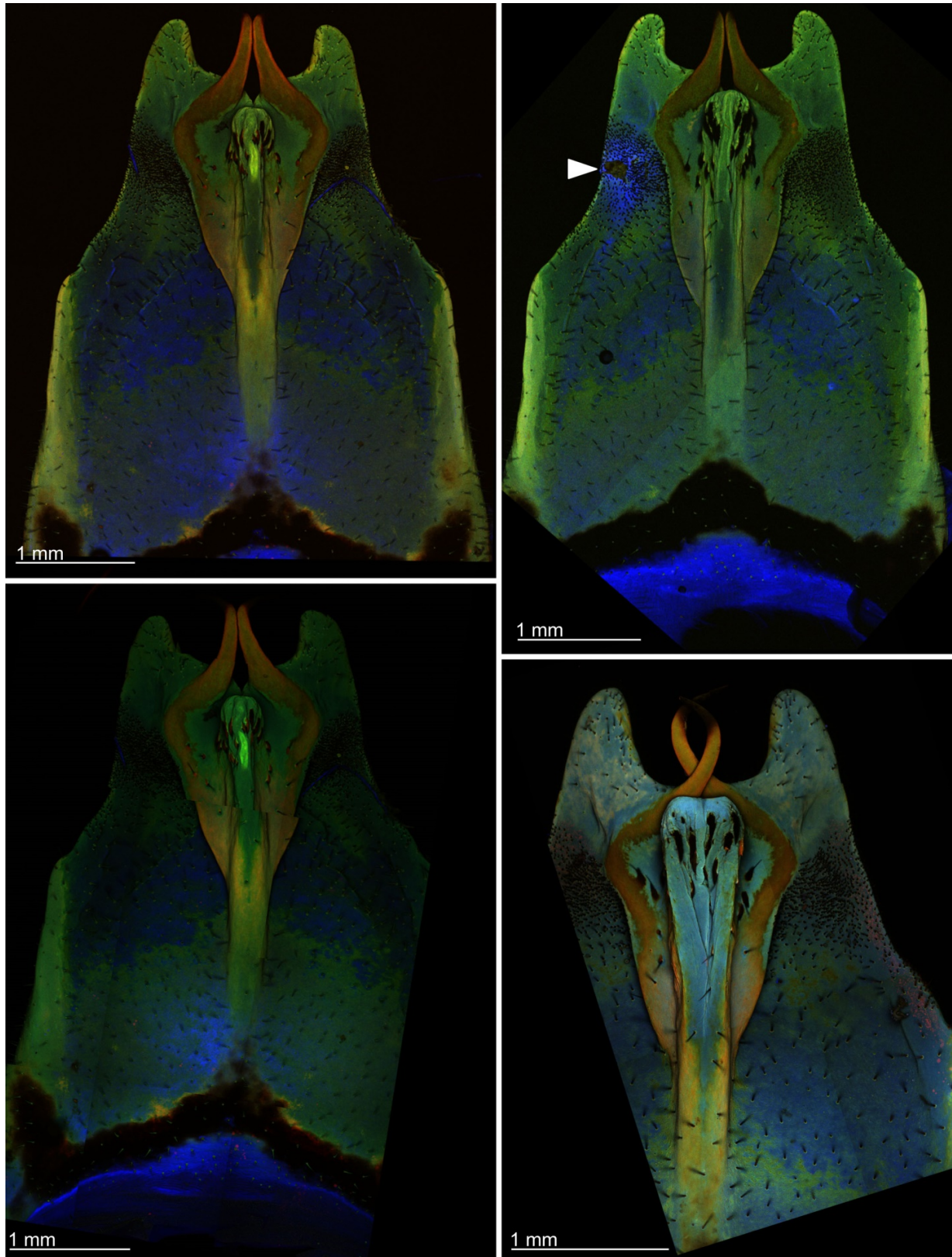


Fig. S3. Confocal laser scanning microscopic images of the subgenital plate in *Metaplastes ornatus*.

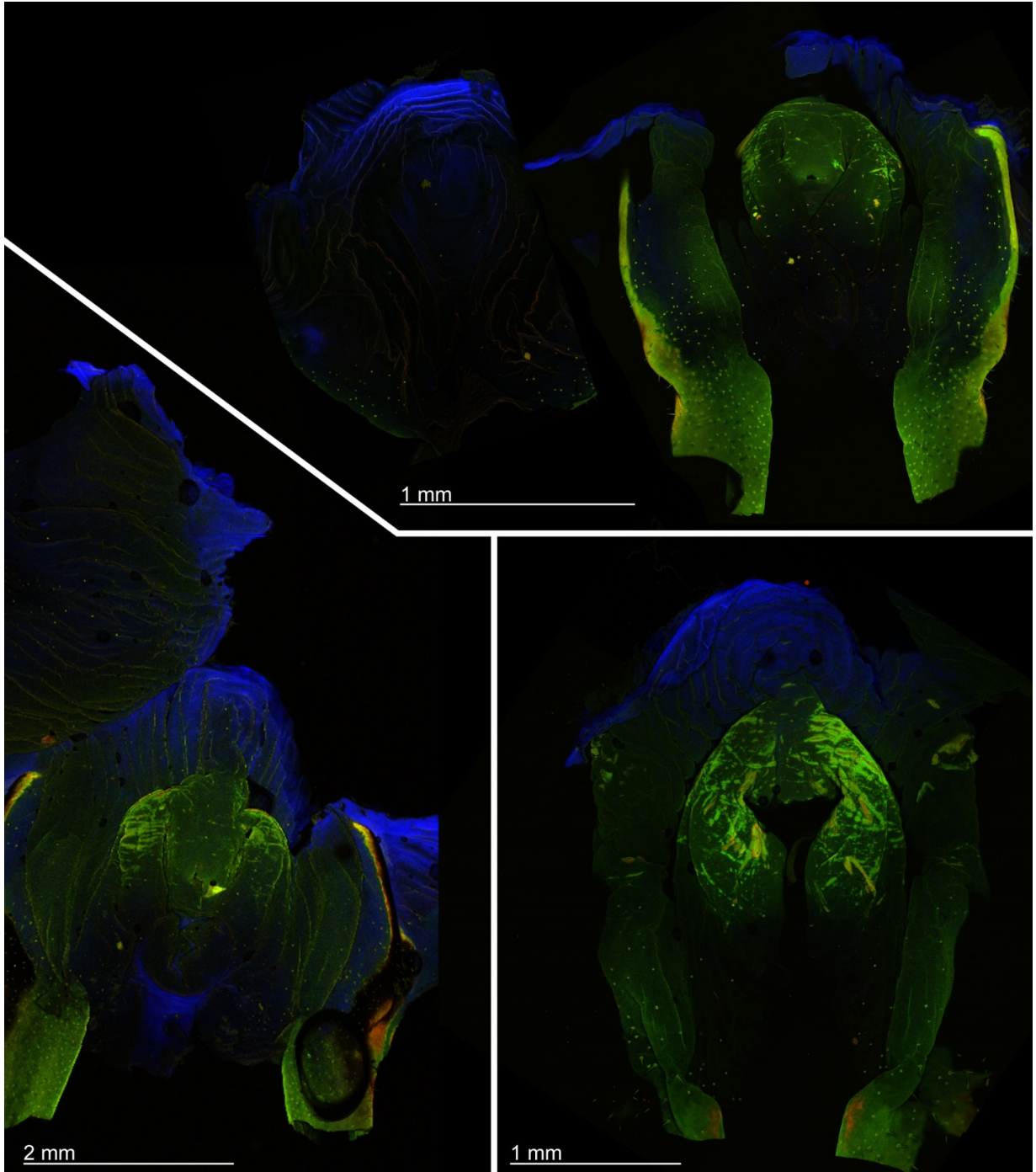


Fig. S4. Confocal laser scanning microscopic images of the genital chamber in *Metaplastes ornatus*.

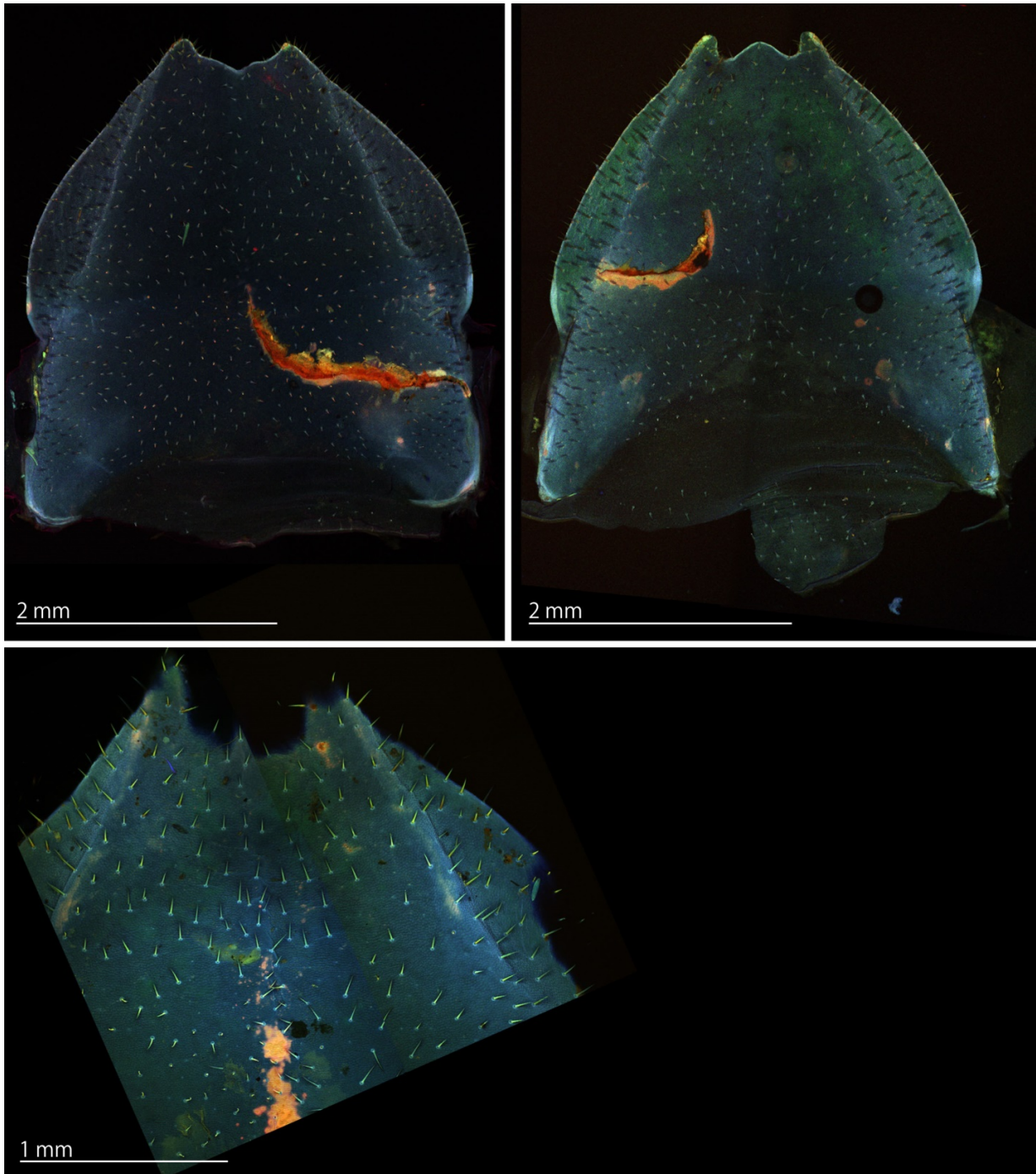


Fig. S5. Confocal laser scanning microscopic images of the subgenital plate in *Poecilimon veluchianus veluchianus*.

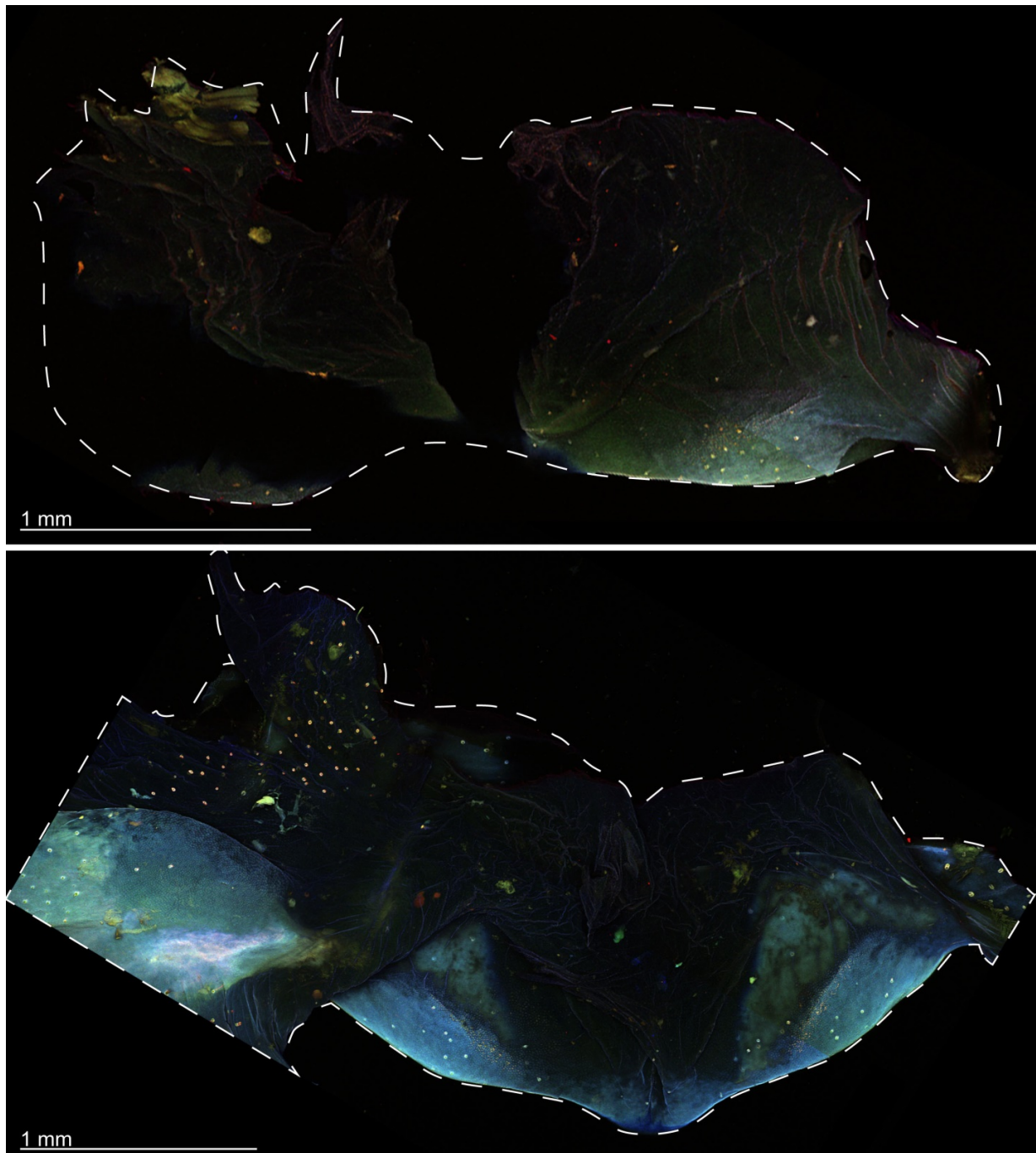


Fig. S6. Confocal laser scanning microscopic images of the genital chamber in *Poecilimon veluchianus* *veluchianus*.

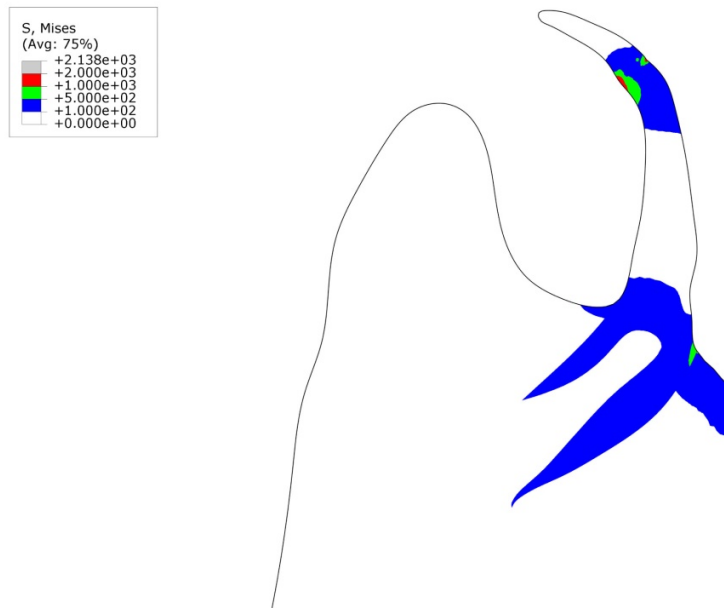


Fig. S7. The distribution of the von Mises stress in the 'reference model'. The model was assumed to be symmetric about the centre line. One of the three key steps after penetration, i.e., pulling, was simulated. Loading and boundary conditions were the same as that of the simulation in the main text (Fig. 4b step2: pull), except that the load applied to the spur was concentrated at the tip.