Repellent Effects of Lamiaceae Plant Extracts on Paederus fuscipes Beetles and Inhibitory Effects of Lime Fruit Oil on Paederus dermatitis

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Paederus dermatitis is a dangerous skin irritation caused by a potent toxin found in the haemolymph of certain types of rove beetles (e.g. Paederus fuscipes). Although the danger of these rove beetles has been shown in various research studies, effective methods for repelling the rove beetles and inhibiting Paederus dermatitis have not been fully investigated. Our objectives are to study the characteristics and behavior of Paederus fuscipes, the repellent properties of local plants against the rove beetles, and the inhibiting properties of various plant extracts against Paederus dermatitis. The results show that only a low level of vibrating force could make rove beetles react, resulting in the release of the toxin. Moreover, the Lamiaceae (mint family) plants can significantly repel the rove beetles. Furthermore, the essential oil obtained from lime fruits can significantly prevent the inflammation of Paederus dermatitis. Finally, these results are used to develop a product for use on skin that repels such beetles and inhibits Paederus dermatitis.

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