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▶ 前沿资讯

1. Assam government to deposit Rs 2,500 in 7 lakh bank accounts of tea garden workers (阿萨姆邦政府在茶园工人的7万个银行账户中存入2,500卢比)

简介: The Assam government Wednesday announced that it would deposit Rs 2,500 each to over seven lakh bank accounts of tea garden workers that were opened just after the demonetisation drive two years ago. This amount is the second installment of the Rs 5,000 incentive announced in the budget for 2017-18 last year. "The state government approved release of Phase-II of the scheme. All beneficiaries covered during the Phase-I will receive the second part of Rs 2,500 in their bank accounts on January 15, 2019," Assam Finance Minister Himanta Biswa Sarma said at a press conference.

来源: The Economic Times 网站

发布日期: 2018-12-19

全文链接: <http://agri.ckcest.cn/file1/M00/06/59/Csgk0Fwa6TKAG9HuAAA21huRnvI971.pdf>

2. Drinking hot tea associated with a 5-fold increased risk for esophageal cancer (饮用高温茶会导致高风险人群食道癌风险增加5倍)

简介: 饮用高温热茶与那些同时饮酒和吸烟的人患食道癌的风险增加有关。该研究结果基于超过45万名参与者的长期随访, 2018年发表在Annals of Internal Medicine上。食道癌的患病率正在增加, 并且存活率较低, 特别是在欠发达地区和男性人群。中国是食管癌发病率最高的国家之一。吸烟和饮酒, 以及热茶的化学成分和不良热效应, 使饮茶与癌症风险之间的关联大大复杂化。研究发现饮用高温茶, 过量饮酒和吸烟的参与者患食道癌的风险比那些没有这3种习惯的人高5倍以上。然而, 没有过量饮酒和吸烟, 每日饮茶与食道癌风险无关。研究作者表示, 这些研究结果表明, 戒除热茶可能对饮酒过量或吸烟的人有益。

来源: Eurekalert 网站

发布日期: 2018-12-11

全文链接: <http://agri.ckcest.cn/file1/M00/06/59/Csgk0Fwa9LqAdT1PAAOgOERoXew333.pdf>

▶ 学术文献

1. Manipulating behaviour with substrate-borne vibrations - potential for insect pest control (利用基质传播的振动操纵行为 - 害虫控制的潜力)

简介: This review presents an overview of the potential use of substrate-borne vibrations for the purpose of achieving insect pest control in the context of integrated pest management. Although the importance of mechanical vibrations in the life of insects has been fairly well established, the effect of substrate-borne vibrations has historically been understudied, in contrast to sound *sensu stricto*. Consequently, the idea of using substrate-borne vibrations for pest control is still in its infancy. This review therefore focuses on the theoretical background, using it to highlight potential applications in a field environment, and lists the few preliminary studies that have been or are being

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performed. Conceptual similarities to the use of sound, as well as limitations inherent in this approach, are also noted.

来源: Pest Management Science 期刊

发布日期:2015-06-20

全文链接:<http://agri.ckcest.cn/file1/M00/06/59/Csgk0FwbYISAf2B8AA1ZdlvBvg284.pdf>

2. The process of pair formation mediated by substrate-borne vibrations in a small insect (底物传播振动介导的小昆虫配对形成过程)

简介: The ability to identify and locate conspecifics depends on reliable transfer of information between emitter and receiver. For a majority of plant-dwelling insects communicating with substrate-borne vibrations, localization of a potential partner may be a difficult task due to their small body size and complex transmission properties of plants. In the present study, we used the leafhopper *Scaphoideus titanus* as a model to investigate duetting and mate searching associated with pair formation. Studying these insects on a natural substrate, we showed that the spatio-temporal structure of a vibrational duet and the perceived intensity of partner's signals influence the mating behaviour. Identification, localization and courtship stages were each characterized by a specific duet structure. In particular, the duet structure differed in synchronization between male and female pulses, which enables identification of the partner, while the switch between behavioural stages was associated with the male-perceived intensity of vibrational signals. This suggests that males obtain the information about their distance from the female and optimize their strategy accordingly. More broadly, our results show that even in insects smaller than 1 cm, vibrational signals provide reliable information needed to find a mating partner.

来源: Behavioural Processes 期刊

发布日期:2014-09-20

全文链接:<http://agri.ckcest.cn/file1/M00/00/00/Csgk0VwbXleAlaoYABH98JpXZQ959.pdf>

3. Convergent Evolution Between Insect and Mammalian Audition (昆虫听觉与哺乳动物听觉之间的趋同演变)

简介: In mammals, hearing is dependent on three canonical processing stages: (i) an eardrum collecting sound, (ii) a middle ear impedance converter, and (iii) a cochlear frequency analyzer. Here, we show that some insects, such as rainforest katydids, possess equivalent biophysical mechanisms for auditory processing. Although katydid ears are among the smallest in all organisms, these ears perform the crucial stage of air-to-liquid impedance conversion and signal amplification, with the use of a distinct tympanal lever system. Further along the chain of hearing, spectral sound analysis is achieved through dispersive wave propagation across a fluid substrate, as in the mammalian cochlea. Thus, two phylogenetically remote organisms, katydids and mammals, have evolved a series of convergent solutions to common biophysical problems, despite their reliance on very different morphological substrates.

来源: Science 期刊

发布日期:2012-11-16

全文链接:<http://agri.ckcest.cn/file1/M00/06/59/Csgk0FwbWZWAFT1bACr3NmGxw44013.pdf>

4. Disruption of the reproductive behaviour of *Scaphoideus titanus* by playback of vibrational signals (通过回放振动信号破坏*Scaphoideus titanus*的繁殖行为)

简介: *Scaphoideus titanus* Ball (Hemiptera: Cicadellidae: Deltocephalinae) is the vector of the grapevine disease Flavescence dorée. In *S. titanus* the malefemale duet (MFD), based on species-specific vibrational signals, is essential for successful copulation. The female reply within a duet is a single pulse that is coupled with the male pulse with constant latency. It has been shown that a rival male can interrupt an existing duet by emitting disruptive noise signals. We tested whether the reproductive behaviour of *S. titanus* can be disrupted by the playback of intra-specific and synthesized vibrational signals. Tested males responded to the playback of an MFD with typical rivalry behaviour. Such behaviour includes silent search for a duetting female (satellite behaviour) and/or emission of disruptive signals. These signals were emitted either after exchange of malefemale pulses or after two male pulses coupled by latency corresponding to the female response window. The onset of male disruptive signals overlapped with a female pulse. We suggest that the intruder's disruptive signals can mask the female reply and confuse courting males. Playback of disruptive vibrational signals reduced the level of male calling and interrupted an established MFD that consequently resulted in a significantly reduced number of copulations. These results indicate that the vibrational communication channel is open to interference either from abiotic environmental noise or from signals produced by sexual competitors or heterospecifics. The present study also suggests that a detailed understanding of leafhopper behaviour is essential for trying new approaches in the development of more environmentally friendly control practices.

来源: Entomologia Experimentalis et Applicata 期刊

发布日期: 2009-11-09

全文链接: http://agri.ckcest.cn/file1/M00/06/59/Csgk0FwbNTSAUuFCAAQ_hqO2ei8145.pdf