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论著

海南省与云南省两地微小按蚊杂交试验

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摘要

目的： 观察海南省与云南省两地微小按蚊之间是否存在种间差异。方法： 在两地牛房采集微小按蚊，单雌驯养繁殖， 用强迫交配方法进行杂交试验， 观察 F 1 代的可育性。制作杂种 F 1 卵巢营养细胞多线染色体标本， 观察染色体各区域的联会情况。结果： 云南省微小按蚊（ Y ） ♀×海南省微小按蚊（ H ） ♂杂交组卵孵化率为 0 ， 卵内无胚胎形成。（ H♀× Y♂） F 1 各回交组中， 大多数卵孵化率显著低于亲本。（ H♀× Y♂） F 1 雌蚊卵巢营养细胞多线染色体 3 R 的 2 9 区、3 6 区及 3 7 区， X 性染色体的 4 区和 6 区出现恒定不联会。结论： 海南省与云南省两地微小按蚊已出现明显生殖隔离， 系两个不同的亲缘种。

关键词 微小按蚊 杂交 多线染色体 亲缘蚊种

分类号

HYBRIDIZATION EXPERIMENTS USING ANOPHELES MINIMUS FROM HAINAN AND YUNNAN

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Abstract

AIM: To observe whether there were any intra-species differences between Anopheles minimus from Hainan(H) and Yunnan(Y). METHODS: Anopheles minimus were collected from cattle shed on the spot. Each isofemale line was set up in the laboratory. Hybridization experiments were conducted by using forced mating between Anopheles minimus from Hainan and Yunnan ,for observing the reproductive ability of F1 hybrids.Ovarian nurse cell polytene chromosomes of F1 hybrid females were examined, to observe any synapsis in different zones of chromosomes.RESULTS: No embryo formation was found within the eggs produced by group Y♀×H♂, the hatching rate was zero. Low hatching rate was shown in other groups with (H♀×Y♂)F1, except for groups with (H×Y)F1×Y. Ovarian nurse cell polytene chromosomes from (H×Y)F1 hybrid females showed constant asynapsis at the 29th,36th and 37th zones in the chromosome 3R, and at the 4th and 6th zones in the chromosome X. CONCLUSION: Reproductive isolation did appear in An.minimus from Hainan and Yunnan.

Key words Anopheles minimus hybridization polytene chromosome sibling species

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