

家蚕白卵突变新系BT924的遗传学研究 Genetical Research of BT924—A New Line in White Egg Mutants of Silkworm

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收稿日期 修回日期 网络版发布日期 接受日期

摘要 新的家蚕白色卵突变系BT924是由蓖麻蚕DNA导入家蚕品种苏学5诱导获得。性状特征: 滞育卵当年白色, 越年后呈浅黄褐色; 蛾区内及区间卵色略有变异, 幼虫皮肤低度透明, 成虫复眼黑色。采用家蚕卵色正常型(黑卵)和突变型红色卵(re)、桃红眼白卵(pe)、第2白卵(w-2)、第3白卵(w-3)及BH863油蚕白卵(w-3bh)与之杂交, 进行遗传分析, 结果表明, BT924白卵及其油蚕性状由隐性单基因控制, 普通遗传, 基因座与w-3相同, 即: 10-19.6。命名为: white egg BT924, 基因符号: w-3bt。w-3bt对re表现上位作用。同时发现家蚕基因库保存的桃红眼白卵(pe)标记基因系pe000同时持有红色卵(re)基因, 其卵色基因型为re pe/re pe。
Abstract: A new line in white egg mutants of silkworm (*Bombyx mori*)—BT924 was derived from incorporation of eri?silkworm (*Philosamia cynthia ricini* Donovan) DAN into the silkworm race “Su Xue 5”. It has the following characteristic traits: The diapause eggs are white in color in the hibernating year and become fawn after hibernation; Slight intra-and inter-batch variation in gee color may exist; Larval skin is slightly translucent; And the compound eyes of the imagos are black. In the present research, the new white egg mutant line was crossed with a normal silkworm race (black egg) and with the mutant lines re, pe, w-2, w-3 and w-3bh for genetical analysis. White egg of BT924 together with its translucency was shown to be controlled by a single recessive gene and share the same locus with w-3(10-19.6). It has been named “white egg BT924” with the gene symbol w-3bt. w-3bt is epistatic to re. In addition, the marker gene line pe000 of pe maintained in the laboratory was shown to carry the re gene as well, its genotype being re pe/re pe.

关键词 [家蚕](#) [突变](#) [白色卵](#) [基因分析](#) **Key words** [silkworm](#) [mutant](#) [white egg](#) [gene analysis](#)

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