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观赏桃新品种钟雪的选育

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摘 要:钟雪是以红垂枝为母本、菊花桃为父本进行杂交,从其杂交后代中选择单株进行自然授粉获得的子代中选育的观赏桃新品种。果实为卵形,果面有毛,果皮为绿色,成熟时果肉绿白色;果个较小,单果质量30 g左右,风味酸略带苦,不宜食用。在江苏南京地区8月15日左右成熟,从盛花到果实成熟生育期150 d左右。钟雪花为菊花型,盛花时花径4.1 cm,花瓣白色,数量14~29瓣;花丝白色,数量27~45条,花药黄色,有花粉,花粉量大,雌蕊比雄蕊低,1枚;萼片9~10枚,绿色。近几年观察,在南京地区3月下旬盛花,花期长,盛花期可持续10 d左右,观赏期达半个月。树势中庸,开张型;树体以长、中果枝为主。随着树龄增加,树体有少量流胶,流胶病抗性中等,其他病虫发生较少。适合长江、黄河流域观光园、街道、庭院等栽培,第2年即可开花观赏,第3年结果,坐果率低。

关键词:观赏桃;新品种;钟雪;菊花型

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Breeding report of a new ornamental peach cultivar Zhongxue

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Abstract: Zhongxue is an ornamental peach variety, which was bred from natural pollination of 2007-23 generated from the cross of Hongchuizhi × Juhuatao. Tree of Hongchuizhi is weeping, and flower is dark red, showy. Juhuatao produces flowers that are chrysanthemum-like and pink. Fruit were harvested in 2010 when they reached physiologically ripeness in August, then their seeds were disinfected with 75% alcohol and stored in storage at (3±2) ℃. After three months, when the seeds germinated, they were planted in pots. 56 progeny seedlings were obtained in the greenhouse finally. In late April, the seedlings were planted at 1.0 m × 4.0 m in the field and managed in general cultivation way. Because of its special color and pattern, it was selected in 2013. From 2016 to 2019, the adaptability test of Zhongxue was conducted at Lishui and Nanjing. Through 7 consecutive years of tests, all the traits proved stable. The tree vigor is moderate with an opening canopy. Leaves are green, long elliptic to lanceolate, with a cuneate base. They are 12.8 cm long and 3.6 cm wide, with a length-to-width ratio of 3.54. There are 1 or 2 reniform glands, with a petiole 0.74 cm in length. The flower color is white and chrysanthemum-like, with fourteen to twenty-nine petals. The diameter is about 4.1 cm. The yellow anthers with pollens are on the twenty-seven to forty-five light-white filaments. The single pistil is short than stamen. Sepals are green with nine-ten pieces, with a yellow-green calyx tub. In a 7-year-old tree, the percentage of spurs, short fruiting shoots, middle fruit shoots, long fruit shoots and water shoots with flower buds were 0.7%, 11.8%, 34.7%, 52.1% and 0.7%. The first flower bud is formed at the 3rd or 4th node. The internode length is moderate, 2.61 cm with 56 flowers per meter. Bud break occurs in

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early March in Nanjing area, and the flower begins to blossom in late March, and the flowering period lasts for more than half a mouth. Fruit is mainly ovate, with greenish-white flesh that tastes sour and bitter when mature. The fruit is small, hairiness, with an average fruit weight about 30 g, and can be as large as 41.5 g. The fruit development period is about 150 d and mature in mid-August in Nanjing area. With strong adaptability, the cultivar can be planted in the Yangtze River and Yellow River basins. It is mainly cultivated in the open field in sightseeing parks, courtyards, streets and other leisure places. The trees can also be potted. Planting sites should be with loose soil, good drainage, and shining. Courtyards and streets should be sunny and well ventilated. Insufficient light affects the development of flower buds, resulting in small and sparse flowers, and prone to develop diseases and pests. In order to enhance the ornamental value of spring flower, the plant should be trimmed in winter or early spring to cut off the disorderly branches, so that the overall shape of the plant is elegant when flowering. In summer, upright vigorous shoots should be well managed in order to control their growth and promote flower differentiation. Measures to prevent and control diseases and pests are taken on a daily basis, such as spraying lime sulfur during the period of flower bud expansion, and applying pesticides to prevent the occurrence of aphids and bacterial shot-hole.

Key words: Ornamental peach; New cultivar; Zhongxue; Chrysanthemum type

近些年第三产业蓬勃发展，全国各地桃花节的举办有力助推了乡村旅游业的高速发展，桃花园成为人们春天休闲赏花的好去处。桃花可展其美，亦可弘扬桃文化，使人们感受桃花带来的眼福之乐、吉祥之意、愉悦之情。桃在中国民间素有美好之意，这进一步推动桃在产业中的观赏应用价值。观赏桃因各种花型、树型等特点深得喜爱。近几年中国先后育成了系列菊花型观赏桃品种，如粉线菊[1]、红线菊[2]、粉垂菊[3]和钟丽[4]等菊花型品种。但在花色类型上仍不够丰富，培育不同花色、树型观赏菊花桃品种，更有助于开阔大众视野，丰富桃花品种。

1　选育过程

2007 年以垂枝型、花色深红的红垂枝为母本，开张型、花色粉红的菊花桃为父本配置杂交组合，获得组合后代杂种实生苗 37 株，2010 年春筛选 2007-23 优株在开放的自然环境中进行授粉，生理落果期后定果标记。8 月份果实成熟采收，将果实剖开取出种子，经 75%乙醇消毒后于低温破眠，种子发芽后播种到营养钵中，获得实生苗 56 株。2013 年 3 月底实生苗单株相继开花，其中 C20-27-71 树型为开张型，花为菊花型，重瓣、花色白色，比菊花桃花期早 5 d 左右。2014 年进行嫁接比较试验，2015 年夏季繁殖小苗，选择江苏溧水、南京等地进行试验。2016 年嫁接树开花。连续 7 a（年）对该品种植物学特性和生物学特性进行观察比较，其花型、花色、树姿等表现稳定。2019 年定名为钟雪（图 1），2021 年获植物新品种权（证书号 20210140）。谱系关系见图 2。

图 1　观赏桃花新品种钟雪

Fig. 1　A new ornamental peach cultivar Zhongxue

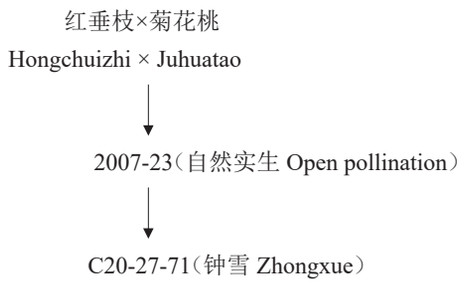

图 2 钟雪的系谱关系

Fig. 2 The pedigree of ornamental peach Zhongxue

2 主要性状

2.1 植物学特征

树型开张型；一年生枝条颜色为绿色，节间长度中等，为2.61 cm。叶片披针形，叶面皱缩，似菊花桃叶，叶片绿色，长度12.81 cm，宽度3.62 cm，长宽比，为3.54，叶柄长0.74 cm；叶缘细锯齿，叶腺肾形。花为菊花型，盛花时花朵直径为4.1 cm，单色，白色；花瓣数14~29枚，重瓣；花丝27~45条，白色，花药黄色，花粉量大。萼片9~10枚，多为10个；柱头相对花药位置低，雌蕊为1枚。果实卵形，果面有毛，果面绿白色，果个较小，单果质量30 g左右，风味酸、苦，离核，不宜食用。

2.2 生长结果习性

生长势中庸，7年生树干周为31.5 cm。花芽起始节位为第3~4节，花密度中等，为56朵•m^{-1}，多复花芽。幼树和成年树均以长、中果枝为主。7年生树果枝比例为100%，其中花束状果枝占0.7%，短果枝占11.8%，中果枝占34.7%，长果枝占52.1%和徒长性果枝占0.7%。自花结实，结果少。

2.3 物候期

在南京地区3月初叶芽开放、花芽膨大，3月下旬始花和盛花，盛花期较长，可持续10 d左右，观花期可达半个月（表1）。8月中旬果皮底色转为绿白色，果实成熟，生育期150 d左右。大量落叶期始于11月上中旬，叶芽萌动至落叶终止生育期270 d左右。

表 1 钟雪与亲本性状比较

Table 1 Comparation between Zhongxue and its parents

品种 Cultivar	盛花期 Full bloom date	花色 Petal color	花瓣数 Petal number	花药颜色 Anther color	树型 Tree shape	花期持续时间 Flower lasted time/d
钟雪 Zhongxue	03-23	白色 White	14~29	黄色 Yellow	开张型 Standard	15
红垂枝 Hongchuizhi	03-24	深红 Dark red	15~18	橘红 Jacinth	垂枝型 Weeping	15
菊花桃 Juhuatao	03-29	粉红 Pink	19~36	橘红 Jacinth	开张型 Standard	16~20

3 栽培技术要点

在长江、黄河流域桃产区均可种植，品种适应性强。以露地栽培为主，适用于观光园、庭院、街道等休闲处，亦可盆栽，管理同一般桃树。选种在观光园需土壤疏松、排水良好、无大树遮盖；庭院和街道需阳光充足、通风良好。光照不足则影响花芽发育，导致花朵小而稀疏，且易发生病虫。为增强春季花期观赏效果，冬季或早春对植株稍作修整，剪去枯乱枝，使开花时株形整体优美。花后多短截，以促发新枝。夏季加强直立旺枝管理，控制徒长，促其多形成花芽。日常加强病虫害防控，花芽膨大期喷施石硫合剂，并适当施加农药，以防蚜虫、红蜘蛛、疮痂病等其他病虫害发生，确保树体健壮生长。

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