山鸢尾花部特征及繁育习性研究

张曦月，钟佩含，卢曦

（吉林农业大学园艺学院 长春 130118）

摘 要:随着人居环境科学的发展，其美化和生态功能日益受到重视，乡土植物是城市绿化的重要部分，有些乡土植物因环境的人为改变以及缺乏科学的保护和管理措施致使资源破坏严重，因此充分了解和利用长白山珍贵的野生花卉种质资源，并在此基础上进行种质创新，才能更好的利用资源进行育种及种质创新工作。中国鸢尾属植物野生资源丰富，将野生鸢尾资源应用到园林中的前提是了解其生物学特性，了解它们的生长发育规律和繁殖方式。山鸢尾分布在我国长白山海拔 1500-2500 米的亚高山湿草甸或沼泽地上，有一定的耐旱性，具有较高的观赏价值，是难得的育种和绿化材料。【目的】目前对山鸢尾花部特征及繁育习性等方面的研究还鲜有报道，因此了解山鸢尾生殖生物学相关基本特征对利用遗传育种进行花色改良以 进一步丰富山鸢尾的花色和提高应用价值具有重要的意义，为其扩繁和园林应用提供理论指导与技术支持，亦为以后开发利用该属的其它野生种类提供借鉴。【方法】本文选取从长白山引种的山鸢尾（*Iris setosa*）为研究对象，采用定点观察与人工授粉等方法，对引种两年的山鸢尾的花器官特征、开花动态、花粉形态及活力、柱头可授性、繁育习性与访花昆虫进行了观察与研究。【结论】山鸢尾在吉林省长春市地区为 5 月下旬—6 月中旬开花，整体花期约为 23d，单花花期 2～4d，单株花期 10～14d。雄蕊先熟，雌蕊后熟；山鸢尾花粉在开花前一天花粉未散出时就具有很强的活力，此时柱头还没有可授性，花粉生活力最高时间点在开花当天 8 点左右；花粉活力与柱头可授性均为开花当天最强，随后下降；雌雄异位，开花过程中柱头向下弯曲，雄蕊始终短于柱头；花粉/胚珠比 386.9，杂交指数为 5。山鸢尾的繁育习性为异交为主，部分自交亲和，需要传粉者，自然状态下存在花粉限制，不存在无融合生殖现象，食蚜蝇、中华蜜蜂、熊蜂为潜在传粉者。

关键词：山鸢尾；花部特征；开花动态；繁育习性；访花昆虫

Study on flower characteristics and breeding habits of *Iris setosa*

Zhang Xi Yue,Zhong pei han,Lu Xi

Jilin Agricultural University, College of Horticulture, Jilin Provine, Changchun, 130118

Abstract: With the development of human habitat science, more and more attention has been paid to its beautification and ecological functions. Native plants are an important part of urban greening, and some native plants have been seriously damaged due to human changes in the environment and lack of scientific protection and management measures.Therefore, we should fully understand and utilize the precious wild flower germplasm resources in Changbai Mountain, and conduct germplasm innovation on this basis.In order to make better use of resources for breeding and germplasm innovation.There are abundant wild iris resources in China. The premise of applying wild iris resources to gardens is to understand their biological characteristics, their growth and development rules and reproduction mode.*Iris setosa* is distributed in the subalpine wet meadows or marshes at an altitude of 1500-2500 meters in Changbai Mountain, China. It has a certain degree of drought tolerance, has high ornamental value, and is a rare breeding and greening material.【Objective】At present, there are few reports on the flower characteristics and breeding habits of *Iris setosa*. Therefore, understanding the basic characteristics of reproductive biology of *Iris setosa* is of great significance for the improvement of flower color by genetic breeding

to further enrich the flower color of *Iris setosa* and improve its application value, and provide theoretical guidance and technical support for its propagation and garden application.It also provides reference for the future development and utilization of other wild species of this genus.【Method】In this paper, (*Iris setosa*) introduced from Changbai Mountain was selected as the research object, and the flower organ characteristics, flowering dynamics, pollen morphology and vitality, stigma acceptability, breeding habits and flower-visiting insects of *Iris setosa* introduced from Changbai Mountain for two years were observed and studied by means of fixed point observation and artificial pollination.【Conclusion】The flowering period of *Iris setosa* was from late May to mid-June in Changchun, Jilin Province. The whole flowering period was about 23d, the single flowering period was 2 ~ 4d, and the single flowering period was 10 ~ 14d.Stamen ripens first, pistil ripens later;The pollen of iris orris has strong vitality before the pollen is dispersed the day before flowering. At this time, the stigma has no receptivity, and the highest time of pollen viability is around 8 o 'clock on the day of flowering.Pollen viability and stigma acceptability were the strongest on the day of flowering, and then decreased.The stigma bends downward during flowering, and the stamens are always shorter than the stigma;The pollen/ovule ratio was 386.9 and the hybridization index was 5.The breeding habit of *Iris setosa* is mainly outbreeding and partial self-compatibility, which requires pollinators. In the natural state, pollen restriction exists and apomixis does not exist, and hoverflies, apis cerana and bumblebees are potential pollinators.

Key words:：*Iris setosa;*Floral characteristics;Flowering dynamics;Breeding habits;Flower visiting insect