



Urban microclimatic influence on flowering phenology and floral traits of *Chaenomeles x superba* 'Pink Lady'

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INTRODUCTION & AIM

Urban microclimatic variations influence **plant phenology** and **reproductive performance**, with important implications for sustainable urban green space planning (Neil & Wu, 2006).

Aim:

To examine the influence of different **urban habitats** on the **morphological traits** and **flowering phenological characteristics** of *Chaenomeles x superba* 'Pink Lady'.

METHOD

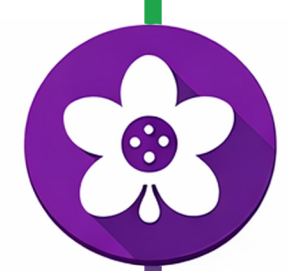


Study Period
March 1 – April 8, 2025

Regular field visits at both sites for detailed phenological monitoring



Study Sites
Urban street vs. park environment
Two contrasting urban habitats



Phenology
Monitored using BBCH scale:

- BBCH 60 – Beginning of flowering (>10%)
- BBCH 65 – Full flowering (>50%)
- BBCH 69 – End of flowering (>80%)



Floral Traits
(50 flowers per plant, N = 100)

- Sepal & petal length
- Flower diameter
- Number of petals, stamens, pistils
- Number of fertile carpels

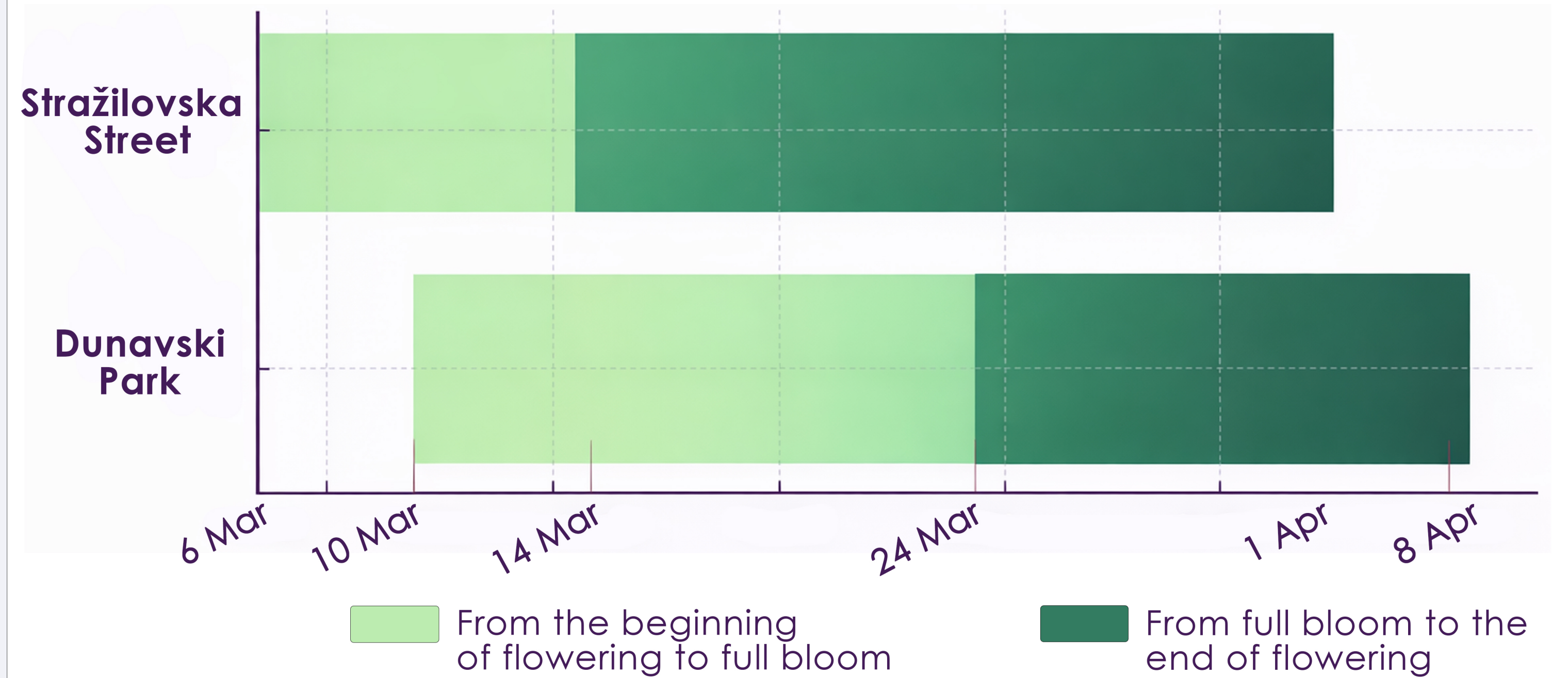


Data Analysis

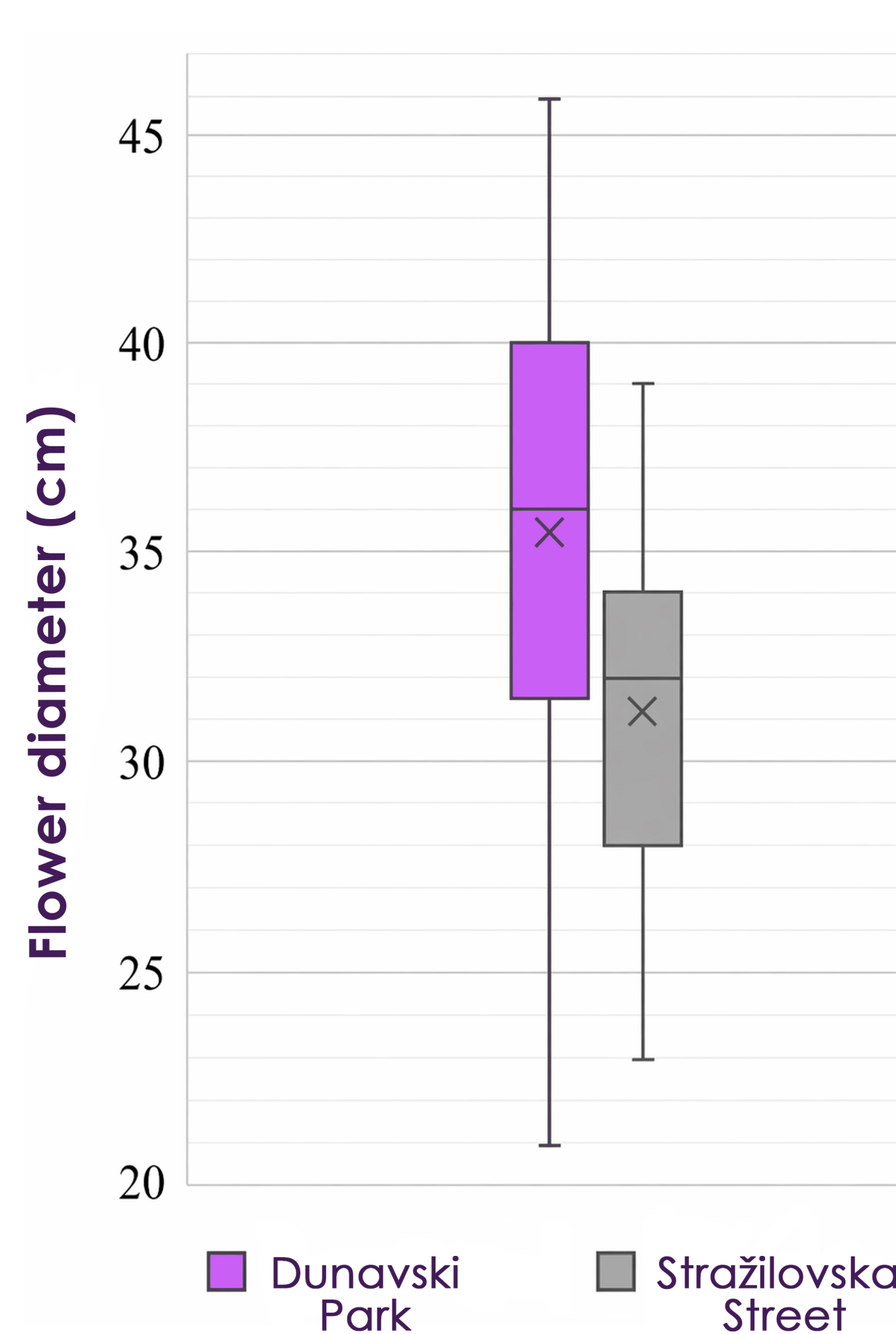
- Descriptive statistics (mean, SD, min, max)
- Independent samples t-test (p < 0.05)
- Software: RStudio & Excel

RESULTS & DISCUSSION

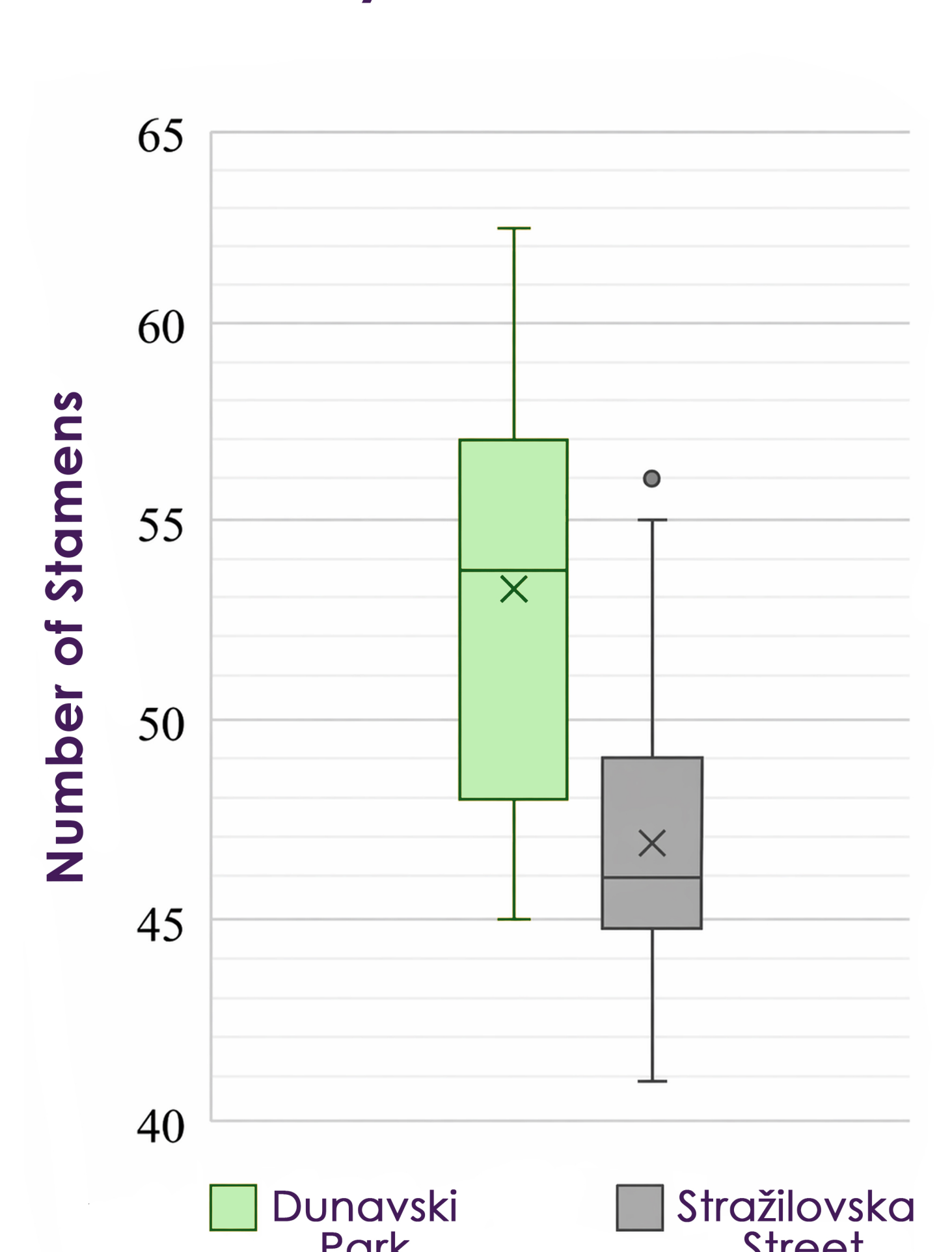
Flowering phenology of *Chaenomeles x superba* 'Pink Lady'



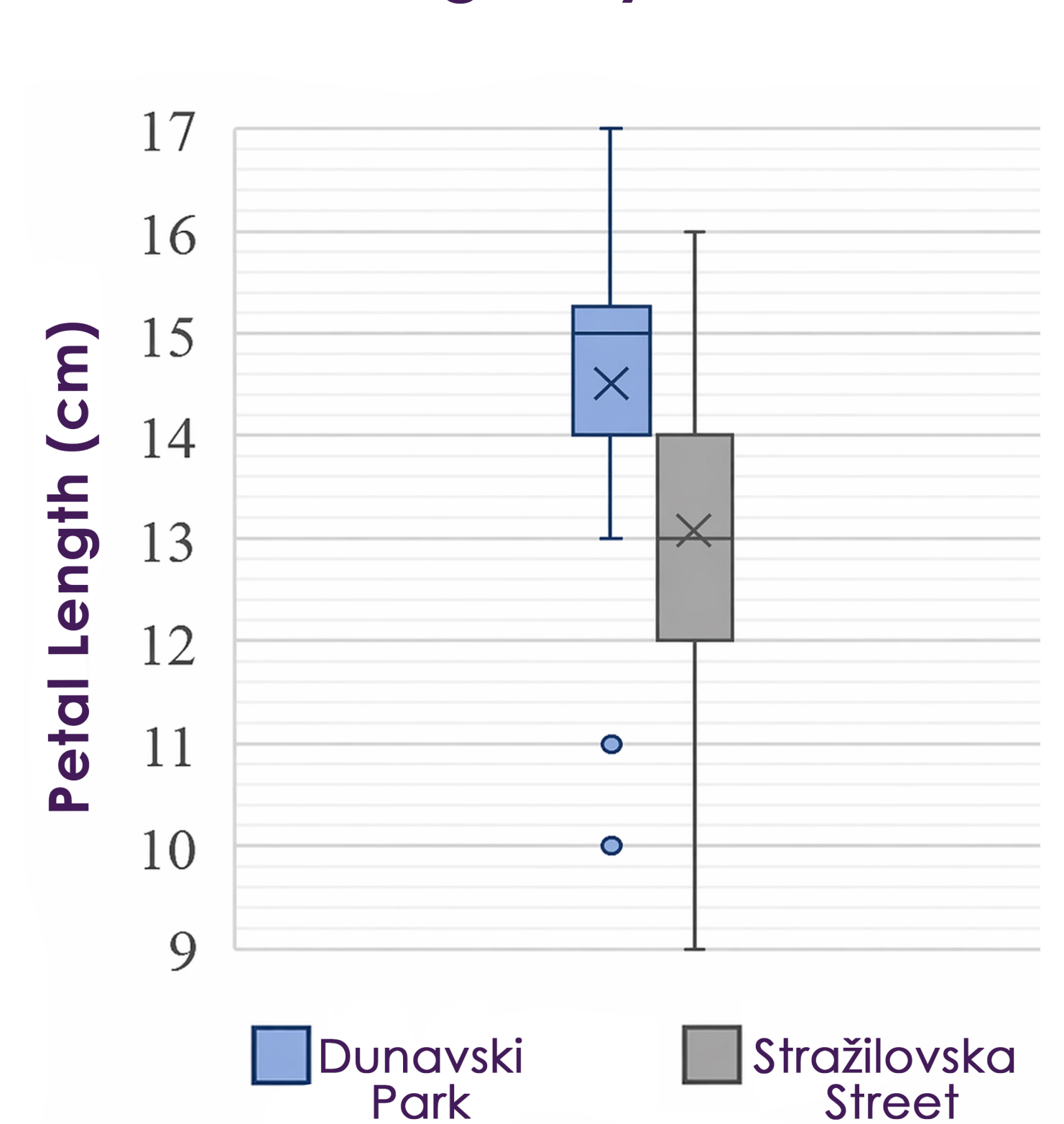
Flower Diameter by Location



Number of Stamens by Location



Petal Length by Location



CONCLUSION

Urban conditions **affected** the phenology and floral traits of *Chaenomeles x superba* 'Pink Lady'. Flowering was **earlier and shorter in the street**, while the **park showed longer and more stable flowering** with larger flowers and more stamens. Favorable microclimate supports better reproductive development, while urban stress limits it.

REFERENCES

Neil, K., & Wu, J. (2006). Effects of urbanization on plant flowering phenology: a review. *Urban Ecosystems*, 9(3), 243-257.