

31. *ANEMONE PULSATILLA* L. (RANUNCULACEAE) — Pasque-Flower, Pulsatilla

Sometimes cultivated as an Easter-blooming flower. It is a popular rock garden plant in the U.S. Juice of the purple sepals gives a temporary green stain to paper, linen, and Easter eggs. Anemonin and protoanemonin are bactericidal.¹¹

The leaf is used in folk remedies for warts, the plants for pterygium.⁴ Reported to be alterative, antidotal, diuretic, emmenagogue, and expectorant, the pasque flower is a folk remedy for asthma, bronchitis, catarrh, diarrhea, gout, headache, hemicrania, migraine, neuralgia, ophthalmia, pertussis, rheumatism, and warts.³² Homeopathically used for amenorrhea, bilious attacks, dysmenorrhea, dyspepsia, earache, gastritis, measles, neuralgia, otitis, rhinitis, toothache, and urticaria.^{2,33}

Fresh herb contains ranunculin $C_{11}H_6O_8$ which on fermentation yields glucose and protoanemonin. Tannin, resin, and 0.19 to 0.75% saponin are also reported in the root and rhizome. Flowers contain delphinidin- and pelargonidin-glycosides. Fructose, and the acetate of beta-amyrin and beta-sitosterol, arabinose, galactose, glucose, rhamnose, and hederagenin ($C_{30}H_{48}O_4$) also occur in this or a closely related species.³³ Hartwell reports anemonin, active in the KB tumor system.¹⁰

Toxicity — Allergenic information has been summarized⁶ indicating that patch tests (20 to 60 minutes) produced vesicular reactions in volunteers. Hyperpigmentation appeared at the test sites accompanied by conjunctivitis and nasal mucosa, due to the vapor.⁶ Protoanemonin is an irritant toxic principle, potentially hazardous to livestock.¹¹