

**TREE OF HEAVEN**  
[*Ailanthus altissima* (Mill.) Swingle,  
*A. glandulosa* Desf.]  
AIAL



UGA0016005

**Habit:** Deciduous tree to 30 m (98 ft) in height.<sup>4</sup>

**Reproduction:** By seed and vegetatively via root suckering.<sup>8</sup>

**Leaves:** Pinnately compound to 1 m (3 ft) in length with 11-41 leaflets, each with a 'thumb' or lobe at the base; leaflet teeth have glands.<sup>8</sup>

**Stems:** Bark gray and smooth; younger twigs covered with a light brown to reddish brown pubescence; thick or chubby tips; may grow up to 2 m (6.5 ft) in one season.<sup>4</sup>

**Flowers:** Dioecious; hermaphrodites exist;<sup>8</sup> bloom June to July; may flower as early as 6 weeks after germination;<sup>6</sup> typically insect pollinated by a variety of pollinators, including bees.<sup>3</sup>

**Fruits/Seeds:** Two-winged samara (180°) with one central seed; sets late summer; over 300,000 seeds per tree documented;<sup>1</sup> seeds may remain on the tree through winter;<sup>4,14</sup> wind dispersed; cold stratification not required for germination;<sup>11</sup> seed bank formation thought unlikely,<sup>16</sup> though found as part of an urban forest seed bank.<sup>15</sup>

**Habitat:** Native to China; several introductions into the U.S. since 1784;<sup>7</sup> found in poor and rich soil on steep and shallow slopes, urban areas, open fields and woodlands, and closed canopy forests; often associated with disturbed habitats;<sup>12,14</sup> USDA hardiness zones 4-8.<sup>4</sup>

## TREE OF HEAVEN



UGA2307007



UGA2307009



UGA1150029

### *Ailanthus altissima* (Mill.) Swingle

**Comments:** Extensive cloning;<sup>16</sup> at least 5 cultivars;<sup>4</sup> crushed leaves, stems, and roots smell of rancid peanut butter; allelopathic properties present,<sup>13</sup> though negative effects may be less severe if previously exposed;<sup>17</sup> tolerant of several air pollutants;<sup>10,18,20</sup> seedlings are drought resistant;<sup>21</sup> quassinoid compounds may deter some insect herbivory<sup>9</sup> and frugivory,<sup>19</sup> but seeds and tissue may be preyed upon by deer, mice, and voles,<sup>5,19,2</sup> even preferentially in the case of some invertebrates.<sup>2</sup>

**Similar Native Species:** Sumacs (*Rhus glabra*, *R. typhina*); walnuts (*Juglans nigra*, *J. cinerea*); none of the crushed leaves or broken stems of these have the same odor; fruits not samaras.<sup>8</sup>