Picturing China

The expeditions and photographs of William Purdom

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The Arboretum's ongoing history of plant collection includes the contributions of a host of colorful and intrepid characters, many sadly neglected by history despite the importance or difficulty of their efforts. Among these one might include William Purdom (1880–1921) who explored China for the Arnold Arboretum during the same period and in some of the same regions as the much better known Ernest Henry Wilson. Compared to Wilson's Herculean efforts, Purdom's work was more modest, but no less important in the history of botanical collection.

Purdom captured this image of a ravine leading to Peling Range in Western Gansu during his 1909–12 expedition.

Like Wilson, Purdom was a native of England, where he trained as a gardener and worked for several firms including the famed Veitch Nursery before becoming an employee and student at the Royal Botanic Gardens, Kew. Arboretum Founding Director Charles S. Sargent hired him in 1909 for a three-year assignment to collect woody plants from China. He asked Purdom to "bring into our gardens Chinese plants from regions with climates even more severe than those of New England." Purdom's former colleagues at Veitch co-sponsored the 1909–1912 expedition as they had previously for the first of Wilson's trips for the Arboretum. Much to Sargent's annoyance, Purdom made fewer collections than Wilson, but it was not for lack of trying; his inexperience in Asia, combined with bouts of ill health and the general political unrest in the country, hampered his work and made for some hair-raising escapes. He found success in his collecting in Shaanxi Province however, locating a wild form of tree peony, followed by a period of botanizing in Gansu Province.

Photography was a particularly successful aspect of Purdom's expedition, and like Wilson he employed a camera which used glass plates. While he sometimes took portraits of individual plants, he favored wide vistas of the mountains and valleys of China such as those from Jehol (Chengde, Hebei Province), the Mountain Resort of the Qing emperors. He also proved a gifted portraitist, capturing for posterity a rich anthropological and ethnographic record of the people from the Tibetan border region. The Arboretum holds 173 contact prints of his photographs in our collection, which we were able to digitize several years ago. Quite recently we learned that about 35 of his original glass plate negatives from his Arboretum expedition are housed in the British Library, along with over 200 nitrate film negatives from this expedition and possibly also from his expedition with Reginald Farrar. We look forward to working with curators at the British Library to discover more about their holdings, and applaud their project which will digitize all their Purdom holdings in the near future.

After collecting for the Arboretum, William Purdom teamed up with plantsman Reginald Farrer to continue explorations in the Tibetan border region during 1914–1916. Their collaboration was notable for their collections of many new alpine plants, such as *Viburnam farreri*, and *Buddleia farreri* (now *B. crispa*). At the conclusion of their expedition, Purdom remained in China and took a position as division chief in the recently formed Chinese Forest Service. As part of his work, he established tree nurseries to aid in reforestation of the Chinese countryside. Sadly, his life was cut short on November 7, 1921, when he succumbed to complications following a minor operation.

Purdom's legacy lives on in the plants he collected and shared with the West as well as the extraordinary photographs that document both his journeys and the characteristics of a bygone era in Chinese history. These collections have been carefully preserved in our archives, and digitized to aid the work of scholars and delight the imaginations of the public. Our William Purdom photographs may be viewed at http://via.harvard.edu.

All: Arnold Arboretum Photographic Archives

Above, two of William Purdom's ethnographic photographs from his travels in China include a young peasant girl on the left, and a Kansu Drokwa tribesman on the right, both photographed in Gansu Province in summer 1911.

The British Library collection of Purdom photographs may be viewed as part of the International Dunhuang Project, an educational collaboration which is making historical photographs, manuscripts, paintings, textiles and artifacts from Dunhuang and the Eastern Silk Road available on the Internet. They may be viewed at http://idp.bl.uk by entering "Purdom" in the search box.

VIBURNUMS ALL AROUND (*continued from page 4*)

A recent and potentially devastating scourge is viburnum leaf beetle, a non-native invasive that has been spreading in eastern North America. Both the adults and larvae of this small beetle feed on viburnum foliage and can completely defoliate plants, especially favored species such as arrowwood (*V. dentatum*) and cranberrybush (*V. opulus* and its varieties). And several viburnums themselves can be pests, notably Siebold (*V. sieboldii*) and linden viburnums (*V. dilatatum*), which have become invasive in native woodlands in some regions.

The Arboretum holds a robust collection of viburnums: 273 plants from 160 accessions, representing 78 different taxa. Many were collected in the wild, adding to their research and conservation value. In fact, having so many viburnum species growing on one site has made the Arboretum a destination for a number of scientists. Current research includes Yale graduate student Miranda Sinnott-Armstrong's study of the evolution of fruit color in viburnums and honeysuckles (*Lonicera* spp.) (see back page). Whether you visit the Arboretum for science or a Sunday stroll, be sure to see the viburnum collection this fall.

WRITTEN IN THE RINGS (*continued from page 6*)

the spring will be more sensitive to temperature than those that leaf out later, and that their annual growth will be positively correlated with temperature, since long, cold winters are likely to limit the growing season here in New England. If this is true, it suggests that these "early species" will show increased growth with climate change, at least initially.

My research aims to identify predictors for climate sensitivity that may be relevant worldwide, providing a leg up to future studies of mechanisms behind climate responses and improving forecasts of future biological impacts. Since tree growth is correlated with other aspects of performance—such as reproductive success and mortality—my results may identify climate change "winners" and "losers" at the Arboretum and elsewhere. Understanding how climate affects tree growth is an essential step in preparing for larger changes to come, since trees are a vital component of ecosystems and play a prominent role in the global carbon cycle. Knowing how they might respond will be particularly critical to shaping the adaptation and mitigation efforts that will be necessary in the near future.