

LIFE

Plant specialist’s passion still flowers

Beijing honors botanist for outstanding work in often-dangerous circumstances, **Yang Feiyue** reports.

Wang Qiang’s dark skin and weather-beaten face quickly conveys his sometimes-extreme experiences, on the road and out of doors.

Right after taking a short break for the New Year’s holiday in early January, Wang has already taken trips to the United Kingdom and Kenya, each for about half a month, to study plant specimens.

“Those countries preserve records of plants that existed more than a century ago, which are crucial for botanical studies,” says Wang, a professor at the Institute of Botany of the Chinese Academy of Sciences in Beijing.

For Wang, who is originally from Sichuan province, being on the road has come with the territory since he chose to pursue his PhD at the Beijing institute in 2008. He has focused on plant taxonomy, which has widely been considered by the academic circle as the most challenging, fundamental and crucial studies in the field.

The two recent overseas trips might seem like a breeze to Wang, considering how he has spent more than a decade trekking to the depths of the snow mountains on the treacherously rugged plateau, searching for rare plant species in harsh environments around the Himalayas.

To date, he has collected over 100,000 valuable plant specimens and more than 200,000 related images.

In December, Wang was among the 10 people from all walks of life who were named Beijing role models of the year by the municipal publicity department.

He was acknowledged for his many achievements, such as completing the first English monograph on *Microtoena*, a perennial or annual herbaceous genus (part of the mint family), that covers about 20 species distributed throughout Southeast Asia and southern China.

Widely used as a spice in South and Southeast Asia, *Microtoena* is also commonly applied by some ethnic groups as a medicine in the southwestern region of China.

However, disputes had never ceased about the true nature of the species that were published before, and the phylogenetic relationships between those species were also unclear, Wang says.

To resolve the issue, Wang traversed through the mountainous areas of the Himalayas in search of every possible place where *Microtoena* could be distributed.

After three years of field research, he collected numerous valuable specimens and experimental samples, and analyzed specimens from more than 40 important herbaria at home and abroad.

Based on statistical analyses of population-level traits of various species within the genus and additional comprehensive systematic analyses, he successfully completed the first global taxonomic revision of the genus and published it in 2018.

Studying life science in his undergraduate years at Sichuan University, Wang opted for botany as his graduate focus at the university.

At first, he just wanted to focus on his studies and explore science behind their exceptional beauty, but as he delved deeper, Wang says he came to realize the importance of plants to everyone’s lives and even the national economy.

“For example, major discoveries, such as hybrid rice by Yuan Longping and artemisinin (drugs that have redefined the landscape of antimalarial therapy) by Tu Youyou, were all inspirations from seemingly insignificant plants,” Wang says.

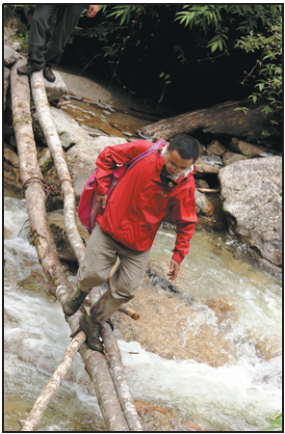
“It’s proof of how a single species can change the fate of a country and transform lives.”

It determined his mind to go down the road and help lay a foundation for future development and utilization of plants.

However, many rare plants grow in harsh environments, like cliffs and steep slopes. Wang was well aware of the hardships and dangers involved in conducting research in this field. The Himalayan area is habitat for rich flora and fauna, including dangerous animals.

Wang says he and his colleagues are most afraid of the wild buffalo herds, rather than bears, wolves and other beasts of prey.

“They charge ahead recklessly and



Closewise from top left: *Himalacodon dicentrifolius*, which is a perennial and grows primarily in the temperate biome; *Meconopsis horridula*, the prickly blue poppy, is an endangered species that grows in high altitudes; Wang Qiang leads a team to study biodiversity in the southern Xizang autonomous region; *Neottia pinetorum* is a rhizomatous geophyte and grows primarily in the temperate biome; *Paeonia ludlowii* is an open, upright medium-sized deciduous shrub with large, divided leaves. **Left and above left:** Wang has come across blizzard and bad road conditions in his quest for rare plant species. PHOTOS PROVIDED TO CHINA DAILY

can overturn tents and trample over anything in their path,” Wang says.

He’s had many close calls during his career.

In 2008, Wang was interrupted by a thunderous roar when he was pressing plant specimens at a makeshift tent against a cliff in Muli Tibetan autonomous county, Liangshan Yi autonomous prefecture, Sichuan province.

“It was from a boulder with a diameter of over 1 meter rolling down the cliff, which narrowly missed the tent,” Wang recalls.

In the following expeditions in the Xizang autonomous region, Wang often came across blizzards, rendering the mountain roads all the more slippery and difficult to drive on.

“A few times, the brake system failed to work, sending us on the verge of falling off the cliff,” he says.

Worse still, years of working on the plateau have taxed Wang’s body. He has suffered from sleep disorders and has to use a machine to aid his breathing.

Yet, fascination with plants and the commitment of his teacher, Hong Deyuan, to the field have kept him going.

“He ascended a snowy Himalayan mountain that is 5,000 meters above sea level at 80 years old in 2017 and he is still coming to the institute for work,” Wang says.

Wang says he feels obliged to carry on Hong’s spirit.

At the moment, Wang is working with international botanical experts on a compilation of the flora of the pan-Himalayan region, a major international collaborative research project in plant taxonomy led by China.

“The plant survey in the broader Himalayan region is crucial because this area represents the most unique geographical area on Earth,” Wang says.

It features over 50 percent of the world’s 7,000-meter-high snowcaps and the most spectacular alpine plant communities, hosting nearly 20,000 plant species.

More importantly, the region is home to over 20,000 vascular plant varieties, accounting for about two-thirds of China’s botanical diversity, he adds.

“Most of the region is in our country, and we should take the lead in sorting them out,” Wang says.

Lu Limin, Wang’s lab colleague, says going to the wildness is like going home to Wang.

“Plant taxonomy requires a good deal of fieldwork, and I can only bump into him during occasional meetings,” Lu says.

“When I call him, he’s usually back in the mountains in the pan-Himalayan area,” she says.

Lu believes Wang’s persistence stems from a heartfelt passion that has enabled him to achieve a series of significant accomplishments.

“His love for his research subjects is evident, because he has affectionately called them ‘little fairies’ or ‘snowy spirits,’” Lu says.

The tough working conditions and position of plant taxonomy as one of the most basic foundations for advanced research have made the discipline less favored by students. So, Wang has made a point of publicizing the field among young people.

In 2018, he made his way into the Youth Innovation Promotion Association of the Chinese Academy of Sciences, where he has actively carried out various popular science activities and delivered botanical science presentations for students in places including Beijing, Hong Kong, and Chengdu, Sichuan.

With his efforts, more students have developed an interest in the discipline.

He still remembers how local students gave him warm applause when he finished introducing how Chinese botanists were surveying plants in the Himalayan area.

Some even came to his office and inquired more about the field, he says.

Wang says he’s grateful to be named as a role model by Beijing, because it’s a recognition of his mission.

“However, I really hope the award can get more people to pay attention to our work and give us more support,” Wang says.

Contact the writer at yangfeiyue@chinadaily.com.cn