Richard Evans Schultes Award Completion Report Alex Greene

I received the Society for Economic Botany's Schultes award in 2021 to fund a portion of my PhD research, originally envisioned as 3 months in Nan Province, Thailand in the summer of 2021. Due to permitting issues and covid-related complications, the fieldwork was pushed back one year until the summer of 2022. During this period, a reshuffling of project partners and field sites was necessitated by changing conditions, so that the fieldwork carried out in August-October 2022 had morphed somewhat from that described in the original grant application.

The overarching PhD project within which this fieldwork falls is focused on plant circulation networks and the role they play in the maintenance, transformation and resilience of biocultural heritage in the Hmong diaspora. After becoming embroiled in the Indochina, Vietnam and Secret Wars, tens of thousands of Hmong refugees fled the newly created Lao People's Democratic Republic to Thailand. Most of these refugees later resettled in a worldwide diaspora including communities in the U.S., France, French Guiana, Australia, Germany, and Argentina. Both during and after the period of resettlement, Hmong individuals transported hundreds of species of plants, mostly in the form of seeds, roots, rhizomes, and cuttings, from Southeast Asia to their diasporic homes. Secondary and tertiary networks of plant exchange developed, by which individuals continue to exchange plants between regions and communities, often mediated by kinship networks.

After conducting fieldwork on these circulation networks in Hmong communities in France, French Guiana and the U.S., I headed to Thailand in August 2022 to begin nearly 3 months of fieldwork with Hmong communities in Chiang Rai, Nan and Phetchabun Provinces. The goals of this fieldwork included documenting what plants Hmong communities cultivate and use in Thailand (as a proxy for communities in Laos), understanding the role of these Thai Hmong communities in global plant circulation networks, and learning more about the experience of Hmong refugees during and after temporary settlement in Thai refugee camps. To address these complex questions, we put together a team of field partners and adopted a mixed methods and multi-sited approach.

A research permit and associated visa were provided by the National Research Council of Thailand (NRCT), largely thanks to the indispensable aid of Dr. Methee Phumthum of Mahidol University and my PhD director Dr. Guillaume Odonne of the French National Centre for Scientific Research (CNRS). Dr. Varangrat Nguanchoo of Phetchaburi Rajabhat University guided us to key field sites in Nan Province and helped facilitate the whole project, including logistics, contacts, document translation and much more. Fieldwork was conducted by myself, ethnobotanist Pananun Somjaiai (in Nan and Chiang Rai), Dr. Phumthum (in Chiang Rai), and Dr. Yutthapong Seubsakwong (in Phetchabun).

After two weeks of preparatory work in Chiang Mai, a base camp was set up at in Nan, the capitol of Nan Province. From this base, fieldwork was organized as a series of short visits of 2-6 days to study site villages. Over the course of 2 months, we conducted fieldwork in the following villages: in Nan Province, Huai Yuak, Tham Wiang Kae, Pa Klang, and Nam Tuang; in Chiang Rai Province, Huai Han and Rom Pho; and Khek Noi in Phetchabun Province. During this time, we carried out 32 interviews and 41 surveys of gardens and farms. Plants were identified primarily through photo vouchers, which were supplemented by the collection of 119 herbarium specimens deposited at the Queen Sirikit Botanic Garden. Their identification has been entrusted to project partner Dr. Prateep Panyadee.

At the moment the data is in the process of being entered and cleaned before it can be analyzed, but based on a rough estimate, we documented the presence of 200-300 species and the use of more than 100 species

in home gardens. These home gardens usually comprise just a small area of densely planted medicinal plants (tshuaj ntsuab), well-protected from chickens by plastic mesh. Rotational agricultural systems have been largely replaced by commercial monoculture, with a focus on crops such as corn, ginger, strawberries, cabbage, and coffee, depending on slope, soil attributes and vegetation. Several centers of commercial distribution of dried medicinal plants were encountered, which ship plants nationally, regionally and globally. Reports of the circulation of living plants were more limited and scattered, but included both local-level exchange, regional exchange, and occasional international exchange, both sending plants abroad and also receiving and bringing plants back from the diaspora to Thailand. Much further work remains to be done to untangle the complicated patterns of circulation and plant exchange, as well as to understand the role these practices play in the maintenance of biocultural diversity in Hmong communities in both southeast Asia and the diaspora.

Project team collects herbarium specimens while conducting an intreview.

Dr. Methee Phumthum photographs plants in a home garden.

Medicinal food plants for sale at a local market.

A small medicinal plant home garden well-protected against chickens.