

## สารໄລເຄນໃນวงศ์ພາຣມືເລີຍ ທີ່ພບ ລະ ອຸທຍານແຫ່ງໜາຕີເບາໄຫຍ່

### LICHEN SUBSTANCES IN FAMILY PARMELIACEAE FROM KHAO YAI NATIONAL PARK.

ກວິນນາດ ບັງເຮືອງ, ກົມທີຣີ ບຸນູປະກອບ ແລະ ພິບູລີ່ມ ມົກຄລສູຂ

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**ບົກຄັດຢ່ອດ:** ກາຣອຢູ່ຮ່ວມກັນຮ່ວງຮາກັບສາຫະຮ່າຍກ່ອເກີດເປັນໄລເຄນທີ່ສ້າງສາຣຖຸດີກຸມືແຕກຕ່າງຈາກພື້ນໜັ້ນສູງທ້າໄປ ສາຣໄລເຄນສ່ວນໃຫຍ່ໄໝມີສີສາມາຮັດຕຽບສອບໂດຍໃຊ້ວິທີເພັະ ຄືກາຣຈຸດສື່ ແລະ ຮົກເລີກຜິວບາງ ຈາກກາຣີກາຢ່າໄລເຄນ 9 ສຸກຸລ 45 ຊົນດ ໃນໄລເຄນວັງຄໍພາຣມືເລີຍ ທີ່ພບໃນເບີຕອຖານແຫ່ງໜາຕີເບາໄຫຍ່ ພບສາຣໄລເຄນ 28 ຊົນດ ແລະ ສາຣສີ 2 ຊົນດ ສະສມອູ່ໃນເນື້ອເຢື່ອໜັ້ນບນ ແລະ ຜັ້ນເມັດລາຂາອອງແທລລັສ ໂດຍສາຣລຸ່ມຫລັກທີ່ພບຄື່ depsidides, depsidones, dibenzofurans, anthraquinones, fatty acid ແລະ xanthones ເຊັ່ນໄລເຄນສຸກຸລ *Relicina* ແລະ *Relicinopsis* ພບສາຣ usnic acid ເມື່ອທົດສອບດ້ວຍສາຣ K ໄທ້ພົກລບທີ່ເນື້ອເຢື່ອໜັ້ນບນ ສ່ວນສາຣ atranorin ແລະ Chloraatranorin ໃນໄລເຄນສຸກຸລ *Bulbothrix*, *Canoparmelia*, *Hypotrachyna*, *Parmelinella*, *Parmelinopsis*, *Parmotrema* ແລະ *Rimelia* (ໄທ້ພລ K+ ແລ້ວອັນນີ້ເຢື່ອໜັ້ນບນ) ແລະ ສາຣໜົນດອື່ນຈາໃນໜັ້ນເມັດລາ ເຊັ່ນ alectronic acid, barbatic acid, divaricatic acid, euplectin, fumarprotocetraric acid, gyrophoric acid, hyposalazinic acid, lecanoric acid, norstictic acid, protocetraric acid, salazinic acid ແລະ vulpinic acid ໂດຍກາຣີກາຮັງນີ້ເປັນກາຣີການບຶ້ອງດັ່ນຂອງສາຣຖຸດີກຸມືຂອງໄລເຄນວັງຄໍພາຣມືເລີຍແລະ ໃນບາງໜົນດມີປະສິທິພາບອາຈສາມາດໃຊ້ປະໂໄຫນ໌ພັດນາເປັນຍາກປຸງໃຈວະນະ ຍາຕ້ານນະເຮົງ ແລະ ດຳໄປໃຫ້ປະໂໄຫນ໌ການແພທຍ໌ແລະ ແກ່ດ້ວຍຕ່ອໄປ

**Abstract:** Lichens compose of fungus and algae. Their metabolic products are different from other higher plants. Most lichen substances are colorless, and not as easily detected. Identification of these substances can be done by using spot test and thin layer chromatography (TLC). Twenty-eight substances and two unknown pigments were mainly found in Parmeliaceae (9 genera and 45 species) collected from Khao Yai National Park. Major classes of secondary metabolites in this family are depsides, depsidones, dibenzofurans, anthraquinones, fatty acid and xanthones. Some lichen substances are pigments, usually yellow or orange in color, and to a certain extent these determine the color of the upper cortex or the medullary tissue. Usnic acid is specific in upper surface of *Relicina* and *Relicinopsis* (K- upper cortex). Atranorin and Chloraatranorin (K+-yellow) are confined to upper surface of *Bulbothrix*, *Canoparmelia*, *Hypotrachyna*, *Parmelinella*, *Parmelinopsis*, *Parmotrema* and *Rimelia*. Other substances included i.e. alectronic acid, barbatic acid, divaricatic acid, euplectin, fumarprotocetraric acid, gyrophoric acid, hyposalazinic acid, lecanoric acid, norstictic acid, protocetraric acid, salazinic acid and vulpinic acid. This study was the first attempt to investigate lichen substances of the family Parmeliaceae. The substances will be tested for antibiotic activity, antitumor activity, and possible usage in pharmacological and medicinal applications in the future.