[Natural Medicines, 48, 161-164 (1994)] [Lab. of Herbal Garden]

Difference of Internal Structures of Underground Parts of *Gentiana Lutea* L. with Growth.

MORIYUKI IIDA, YASUYUKI ASAMI, TOSHIHIRO TANAKA*, YOSHIO HATAKEYAMA, EIJI SAKAI

We conducted microscopic studies of the internal structure of every part of 'Gentian'. In the roots of average size, outer cortex is not present, and the vessels radiate in xylem, which as in narrower roots, an outer cortex exists, and the vessels are scattered in xylem. In rhizomes, the collenchyma cells are arranged in rings like annual rings in cortex, and the vessels are scattered in xylem. The root trace starts at xylem, and the leaf trace starts at pith. The vessels in the leaf trace are generally narrow and some are spiral. Many sieves distribute evenly in the pith.

[Natural Medicines, 48, 191-197 (1994)] [Lab. of Herbal Garden]

Pharmacognostical Studies on tne Chinese Crude Drug 'Quanxie' (1) On the Morphology of 'Quanxie'.

ZHANG GUI-JUN, TOSHIHIRO TANAKA*, ZHANG LI-HUA, KOJI OHBA

Twenty two commercial samples of the Chinese crude drug and dried *Buthus martensii*, were comaparably morphologically studied. Most of the samples were prepared by boiling scorpions in salt water. The samples could be roughly classified into two types according to the color of carapace and tergite of the preabdomen: blackish type and yellowish type. Approximately 90% of the commercial samples were of the blackish type. A microscopic observation of *B.martensii* showed that the size of the tubercular process on the postabdomen was about twice that on the carapace and tergite of the preabdomen, and that the bristles on some parts were quite characteristic.

[Natural Medicines, 48, 198-202 (1994)] [Lab. of Herbal Garden]

Pharmacognostical Studies on the Chinese Crude Drug 'Quanxie' (2) Effect of Processing Method on the Quality.

ZHANG GUI-JUN, TOSHIHIRO TANAKA,* LIANG XUE-QIN, LIU JIE, LU XIU-LIAN, TOMOKO KAWAMURA, YUKIO YORO

22 commercial samples of the Chinese crude drug Scorpio were examined for their ash and chlorine contents. There was positive correlation between the values of ash and those of total chlorines. The mounts of inorganic elements (K, Ca, Fe, Cu, Zn Mn) and 17 amino acids were about the same regardless of the difference in the processing procedures. The inorganic elements contents widely varied depending on the habitat. Difference among individuals was also noted.