Isomerization of Luciculine*

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Lucidusculine (I) $(C_{24}H_{35}O_4N)$ is one of the aconite alkaloids; upon hydrolysis it gives a trihydric amino alcohol, luciculine (II) $(C_{22}H_{33}O_3N\cdot H_2O)^{1}$. In contact with palladium-carbon in the presence of hydrogen and methanol, compound II was found to isomerize to a ketone base, isoluciculine (III), m.p. $131\sim136$ C°, λ_{max} in MeOH 302 m\mu, log\varepsilon1.4 (Anal. Found: C, 71.22; H, 9.33; N, 332; H₂O, 2.33. Calcd. for $C_{22}H_{33}O_3N\cdot 1/2H_2O$: C, 71.71; H, 9.30; N, 3.80; H₂O, 2.44%). Compound III showed a band at 5.82 μ in the infared spectrum, and was considered therefore to be a cyclic six-membered ketone. Since it was shown previously that a terminal methylene group exists in compound II1), this isomerization seems to proceed similarly to that of Shimoburo base I2, hypognavine3) or napellonine4,**) as follows:

$$(II) \qquad (III) \qquad H \qquad O \qquad O$$

On the basis of these observations, the presence of an allyl alcohol moiety in the structure of compound II may be claimed.

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¹⁾ H. Suginome, T. Amiya and T. Shima, in preparation.

²⁾ T. Sugasawa, Pharm. Bull. Japan, 4, 6 (1956).

S. Sakai, ibid., 5, 1 (1957).
K. Wiesner, Z. Valenta, J. F. King, R. K. Maudgal, L. G. Hamber and Shô Itô, Chem. and Ind., 1957, 173.

^{**} It has been shown that napellonine is identical with Shimoburo base I5).

⁵⁾ K. Wiesner, Shô Itô and Z. Valenta, Exper., 14, 167 (1958).