mixture, measured as glycine. This represents a substantial yield if it is considered that most of the hydrogen cyanide is condensed into polymeric hydrogen cyanide[4].

When 100 μl. aliquots of the test solution were chromatographed, small spots of several other ninhydrin-positive compounds were observed. In addition, by means of a Mineralight lamp (2537 Å.) a number of ultra-violet-light absorbing and fluorescent spots were detected on two-dimensional chromatograms.

In line with the above results, Wippermann[6] and other workers[4] demonstrated many years ago the formation of glycine by mild alkaline hydrolysis of an oligomer of hydrogen cyanide which had been obtained from hydrogen cyanide by base catalysis. It is possible that the well-established tetramer of hydrogen cyanide, di-aminomaleonitrile[7], and its assumed intermediate, aminomalonitrile[8], are the precursors of the C_2-, C_3- and C_4-amino-acids obtained in the present experiments.

Work is in progress for the identification of all the amino-acids, for the elucidation of the mechanism of amino-acid synthesis, and for determination of the nature of the other compounds synthesized from hydrogen cyanide.

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Occurrence of *n*-Odd-Numbered Monoethylenic Fatty Acids in the Liver Oil of the New Zealand School Shark (*Galeorhinus australis* MacLeay)

Investigations on the minor fatty acid constituents of the liver oil of the New Zealand school shark have resulted in the isolation of the saturated *n*-odd-numbered acids as well as the *iso*- and (+)*anteiso* acids of the C_{15} and C_{17} series[1,2]. These acids had not previously been found in fish oils, but had been earlier isolated from the depot[3] and milk fats[4] of ruminants. In addition, the occurrence of *n*-heptadecanoic acid and of (+)-14-methylhexadecanoic acid in tall oil has been established[5]. The occurrence of *n*-odd-numbered unsaturated acids in animal depot fats was first recorded in lamb caul fat, from which Δ^9-heptadecenoic acid was isolated[6] and the presence of pentadecenoic acid indicated: Δ^9-heptadecenoic acid has also been obtained from musk-ox fat[7] and from butterfat[8]. Following the feeding of *n*-odd-numbered saturated fatty acids, Appel, Böhm, Keil and Schiller[9] found that the corresponding Δ^9-mono-unsaturated acids were deposited in the depot and milk fats of goats and sheep. Apart from the above-mentioned instances, however, *n*-odd-numbered unsaturated acids have not been isolated from depot fats.

In shark liver oil, following extensive ester fractionation and low-temperature crystallization, fractions containing concentrates of *n*-mono-unsaturated acids of the C_{15}, C_{17} and C_{19} series have been prepared. These fractions have now made possible the isolation of Δ^9-heptadecenoic acid in pure form, and of Δ^{11}-nonadecenoic acid as a concentrate (73 per cent) with positional isomers mainly Δ^{10}- (13 per cent) and Δ^{12}- (14 per cent) nonadecenoic acids as impurities as judged from the yields of dibasic acids produced by oxidation using the method of Haverkamp Begemann *et al.*[10]. The resolution of these positional isomers is likely to prove difficult in contrast to the Δ^9-heptadecenoic acid, which was relatively easy to crystallize in pure form. From the weights of the concentrates and the results of gas-liquid chromatographic analysis it is estimated that pentadecenoic acid, Δ^9-heptadecenoic acid and Δ^{11}-nonadecenoic acid respectively form 0·018, 0·073 and 0·042 per cent of the shark liver oil fatty acids. These results serve to extend the similarities of ruminant fats and shark liver oils in regard to the occurrence of *n*-odd-numbered saturated and unsaturated fatty acids in addition to *iso*- and (+)-*anteiso*-acids of the C_{15} and C_{17} series earlier reported. Work on the isolation of the *n*-odd-numbered mono-unsaturated fatty acids is being continued.

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Scorpamins : the Toxic Proteins of Scorpion Venoms

Following preliminary work[1,2], extensive purification of the toxins secreted by two species of North-African scorpions (*Androctonus australis* and *Buthus occitanus*) was accomplished by aqueous extraction, acetone fractionation in the cold, chromatography on 'Amberlite *CG* 50' and filtration on dextran gel ('Sephadex *G* 25'). Table 1 summarizes the steps of purification from the glands.

Comparative experiments were performed, starting with the organ containing the venom glands (telson) or with the emitted venom obtained by a manual or an electrical method previously described[4]. The