laïres, presque aussi larges que longs, à base postérieure, à angles antérieur et interne arrondis. *Rostre* long de 1.5 mm. (de son bord postérieur dorsal à l'extrémité de l'hypostome), à base bien plus large que longue, les angles postérieurs à peine saillants; aïres poreuses un peu allongées, peu profondes. *Chélicères* à doigt long de 230 µ; apophyse interne près de l'extrémité antérieure, transversale, à trois pointes, la médiane plus forte; apophyse externe à trois dents, les deux postérieures fortes et aiguës. *Hypostome* un peu spatule, arrondi en avant, à nombreux denticules terminaux; sur chaque moitié, trois files de 10-12 dents égales, suivies, presque jusqu'à la base, de dents squamiformes en 3-4 files, les externes plus longues. *Palpes* longs, étroits; premier article à face dorsale moitié moins longue que la face ventrale, qui se prolonge en dedans par une apophyse longitudinale, plus longue que l'article, convexe à son bord interne, sur lequel sont insérées de longues soies dirigées en dedans et en avant; deuxième article un peu plus court que le troisième à sa face ventrale, prolongé

Hyalomma aegyptium (♀) doigt de la chélicère gauche (× 135).

à sa base dorsale en une pointe obtuse et plate par dessus le premier; de longs poils au bord ventral interne du deuxième et du troisième article; le quatrième très petit, subterminal, en forme de papille velue, dans une fossette ventrale du troisième. *Pattes* longues, fortes, celles de la quatrième paire dépassant l'abdomen par leurs deux derniers articles au moins. Hanches grandes, presque contigues, bruniâtres; celles de la première paire partagées en deux longues épines, dont l'interne plus large et plus courte; une tubercule à l'angle postéro-externe de la deuxième et de la troisième, et une à chacun des angles postérieurs de la quatrième. Les troisième, quatrième et cinquième articles brun rougeâtre, avec l'extrémité dorsale blanchâtre, parfois concolore. Tarses de la première paire inermes, à pseudo-article terminal en tronc de cône court, élargi en arrière de cette fausse articulation; ceux des autres paires à côtés parallèles, atténués doucement à leur bord dorsal avec deux courts éperons consécutifs à leur extrémité; ceux de la quatrième paire au moins quatre fois aussi longs que larges; caroncule courte, atteignant à peine la moitié de la longueur des ongles.

La femelle *repuë* peut atteindre 2 mm. de long sur 1.8 mm. de large. Corps à peu près aussi large en avant qu'en arrière; côtés parallèles; épaisseur parfois égale à la largeur; glabre ou presque glabre. A la face dorsale, deux sillons antérieurs, divergents en arrière; trois postérieurs, dont le médian s'avance plus en avant, entre les antérieurs. Avant la réplétion complète, le sillon marginal et les poils persistent. Hanches très écartées, réparties sur près de la moitié antérieure. Couleur de corps brun marron, plus clair que l'écusson, parfois blanchâtre avant la réplétion complète; parfois aussi le sillon marginal, avant sa disparition, se montre comme un liseré blanchâtre sur fond marron.

Nymphe.—Corps en ovale court, plus ou moins renflé, de teinte variant du blanc jaunâtre au brun marron, long de 2 à 4 mm. Ecusson rappelant celui de la femelle. Périlèbres petits, presque circulaires.

Observations.—La description qui précède repose sur l'examen de 87 lots comprenant 430 individus, dont 217 mâles, 212 femelles, et 1 nymphe faisant partie de ma collection personnelle, de celles des Muséums de Paris, de Hambourg, de Berlin, de celles de Simon, de Mégnin, de R. Blanchard, etc.

Dans la collection de Berlin, se trouvent les formes indiquées par Koch sous les noms de *H. hispanum* (♀), *H. lusitanicum* (♂), *H. impressum* (♀), *H. dromedarii* (♂). Elles justifient leur assimilation avec *H. aegyptium*.

L'espèce se trouve répandue en abondance dans les divers points de l'Algérie, jusqu'au Sahara, en Tunisie, en Egypte, en Abyssinie. Elle se retrouve au Sénégal, dans le Loango, au Cap de Bonne-Espérance et il est possible que toute l'Afrique en ait été plus ou moins infestée par les caravanes. *H. rufipes* et *H. latum* de Koch lui venaient de l'Afrique du Sud; *H. truncatum* et *H. impressum*, du Sénégal; *H. excavatum*, de l'Egypte.

H. aegyptium rayonne de l'Afrique en Asie: Asie mineure, Perim, Djeddah, Jérusalem, Perse, Téhéran, Turkestan oriental, Lob Nor, Boukkara, Maralbaschi; Mongolie (Koulouja); Inde, Bombay. *H. grossum* et *H. anatolicum* sont attribués par Koch à l'Asie mineure (Smyrne, Sardes), *H. syriacum* à la Syrie. *H. dromedarii* serait répandu aussi bien en Syrie et en Boukkara qu'en Egypte. Kolentat indique *Ixodes hispanus* dans les steppes des Khirghis et son *Ixodes corniger* dans celles de Kisil-Kum, au nord de Kiwa.

L'espèce se rencontre quelquefois en France sur le bétail algérien: On l'a vue ainsi à Vincennes (Mégnin), à Veseul (Romary), à Troyes (Morot) et elle est peut-être acclimatée dans les départements méditerranéens. C'est certainement le cas pour l'Espagne (*H. hispanum*, Koch) et le Portugal (*H. lusitanicum*, Koch), l'Italie (*H. marginatum*, Koch). La collection Simon en renferme bon nombre de l'Espagne méridionale. Dumestre en a recueilli à Bastia sur des Bœufs de

Sardaigne. Berlese le signale aux environs de Florence, et Canestrini en Toscane, en Vénétie et en Sicile.

J'en possède une femelle trouvée parmi des *Amblyomma variegatum* des Bœufs de la Guadeloupe.

H. aegyptium s'attaque aux animaux les plus variés. Le Bœuf, le Dromadaire, le Chameau sont ses hôtes de prédilection. Il est fréquent en Algérie sur le Cheval, le Mulet et l'Âne. On l'a trouvé sur le Sanglier, le Mouton, le Cerf, le Chien, le Chat. Il se fixe souvent aussi sur l'Homme. Frauenfeld dit l'avoir trouvé (*H. hispanum*) sur le cou d'un *Lanius ruficeps* à Messine.† Il recherche de préférence les régions à peau fine et surtout le scrotum et les mamelles. Les jeunes individus abondent dans les herbes et les buissons; les femelles pleines vont se cacher sous les pierres pour y pondre leurs innombrables œufs. En raison des dimensions considérables que la femelle peut atteindre et aussi de sa pullulation, cette espèce est une des plus préjudiciables au bétail des pays chauds.

REFERENCES.

† Journal of the Society of Arts, June 16th, 1905, p. 810. ‡ Indian Plague Commission, 1898-9, vol. II, p. 335, contains a summary of these reports.

CASE OF POISONING FROM TINNED SARDINES: COMA: DEATH: NECROPSY.

By HERBERT CAIGER, M.B.LOND., F.R.C.S.ENG.,
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THE following case of poisoning from tinned sardines seems worthy of record, as vomiting and diarrhoea were absent, and coma was the prominent symptom.

M. W., a healthy white girl, aged 7 years, ate freely from a tin of sardines at her midday meal on Friday, July 21st, 1905. The sardines were noticed to have a "funny" taste. Nothing unusual was noticed when the tin was opened. Soon after she began to complain of headache, and felt queer for the rest of the day, saying that she did not feel right since she had eaten the sardines. During the night she woke up at intervals complaining of pain in the abdomen, which was quickly relieved by rubbing. There was no vomiting or diarrhoea.

Next morning she still complained of stomach ache, and her mother therefore gave her a little whisky, after which she went to sleep. Her mother was not specially alarmed until about midday she tried to rouse the child and found that she could not wake her, and the child's arms and legs were getting cold. I was called to see her about 1 p.m. The child was then in a state of profound coma. There was no corneal reflex, the eyes were divergent, and the pupils dilated when first seen but of medium size soon after, varying from time to time. The skin was pale and the extremities rather cold. Breathing was noisy from the accumulation of mucus in the air passages.

The stomach was well washed out, first with a weak solution of potassium permanganate and then with warm water. The washings from the stomach contained little besides a few curds of milk. No special odour was detected. A hypodermic injection of atropine sulphate ($\frac{1}{2}$ gr.) was given, which was repeated after about half an hour as the pupil did not remain dilated. After the second injection the pupil became dilated and remained so; the skin became flushed and hot. The patient still continued deeply comatose, and was quite unable to swallow. Attempts made to pass the stomach tube again in order to introduce a purgative had to be given up, as the breathing got bad when the tube was introduced. A simple enema was given to induce an evacuation of the bowels, but with little result. During the afternoon a third injection of atropine sulphate was given. About 9 p.m. the child's condition was about the same, but the coma seemed not so deep. The stomach tube was passed and some castor-oil introduced into the stomach; while this was being done some movements of the limbs—probably reflex movements—were made. About 11 p.m. the patient vomited for the first time, and again about 1 a.m. The bowels acted a little later, but at 3 a.m. the child died without having recovered consciousness.

A post-mortem examination was made nine hours after death. Nothing abnormal was found in the stomach or bowels. The brain was much congested, and showed numerous small petechial haemorrhages scattered over the surface as well as in its substance. There were some similar haemorrhages beneath the pericardium covering the surface of the heart. Beyond these lesions nothing else of interest was noted.

There seems to be no other explanation of the facts than to

† Von Frauenfeld, G. R., Zoologische Miscellen. xi (Das Insektenleben ur See), Verhandl. der Zool.-bot. Gesellsch. zu Wien, xvii, p. 461, 1867.

suppose that the child died from some poison generated in the tinned sardines. As coma was not produced until some eighteen or twenty hours after the sardines were swallowed, it would appear that the quantity of poisonous material increased in the alimentary canal after ingestion, or, in other words, that the sardines contained micro-organisms still active, and able to multiply and produce toxic products in the stomach and bowels. The absence of vomiting and diarrhoea permitted the absorption of a sufficient dose of these toxins to cause coma and death. Other cases are on record where tinned foods have contained products which acted as a powerful nerve poison, and not as an irritant poison.

SEVENTY-THIRD ANNUAL MEETING OF THE

British Medical Association.

Held at Leicester, July 24th, 25th, 26th, 27th, and 28th, 1905.

PROCEEDINGS OF SECTIONS.

SECTION OF INDUSTRIAL HYGIENE AND DISEASES OF OCCUPATION.

H. W. LANGLEY BROWNE, M.D., President.

A DISCUSSION ON PHYSICAL DETERIORATION: ITS CAUSES AND EXTENT.

I.—DAWSON WILLIAMS, M.D., F.R.C.P.,
London.

IN accepting the flattering invitation of the President of the Section to open this discussion I was influenced mainly by the hope that the result might be to elicit facts and opinions from others far more competent than myself, as to the effect on physical development of conditions prevailing among the population of industrial centres.

Whether there is any real increase in the proportion of the unfit in the population of Great Britain is a matter upon which opinions differ widely, and as data for comparison between the present and the past hardly exist it is not possible to expect general agreement. It must be admitted, however, that there is sufficient evidence of a great deal of physical unfitness at various ages from infancy to manhood, and the national significance of the admission is increased by the fact that the birth-rate has been declining steadily for the last thirty years, from 34.3 in 1874-8 to 29.1 in 1894-8.

Dr. Butterworth has made for the Physical Instruction Subcommittee of the Salford Education Committee a series of observations on the height and weight of boys in six Salford elementary schools. The general result was in accordance with the expectations founded on his acquaintance with the respective schools and the surrounding districts, that is to say, the anthropometric records were better in the schools serving the better districts.

In Table I, Dr. Butterworth's figures for two schools in 1904 are taken out for comparison with the standard averages for the artisan class and for all classes given by the Anthropometric Committee of the British Association in its report presented in 1883. The Salford measurements were made at three age-periods—8, 10, and 13 years—only those boys being measured whose ages fell within the following periods: (1) from 7½ to 8½; (2) from 9½ to 10½; (3) from 12½ to 13½.

The number of boys examined by Dr. Butterworth is relatively small, but it is to be hoped that he will go on with his investigations, for each year will add to the value of the statistics he is collecting. The boys at school T. are chiefly drawn from the artisan class, but include children of dock labourers, and the district surrounding the school is thickly populated. The boys at school G. are largely drawn from the skilled artisan and clerk classes: they are well dressed and nourished and the school is near a large park. It must be said, again, that the numbers measured at the several ages in Salford were small, but it is worth noting that the weights of the Salford boys in 1904, even in a school such as G., where the general conditions would seem to be very good, are below those of the averages for boys of the artisan class in 1882, and the difference is greater at age 13

than at the earlier ages. Probably the boys measured for the Anthropometric Committee's report were on the average a few months older, but this can hardly be held to account for the whole of the very considerable differences.

TABLE I.—Height and Weight of Boys, Artisan Class, Salford (1904).

Age.	—	Artisans, Salford, 1904.		Anthropometric Committee, 1882-3.	
		T.	G.	Artisans.	General.
8	Height	45.6 in.	47.1 in.	46.4 in.	47.05 in.
	Weight	44.8 lb.	48.6 lb.	54.3 lb.	54.90 lb.
10	Height	49.6 in.	50.5 in.	50.72 in.	51.85 in.
	Weight	53.2 lb.	57.1 lb.	64.00 lb.	67.50 lb.
13	Height	54.0 in.	54.7 in.	55.81 in.	56.91 in.
	Weight	66.9 lb.	68.8 lb.	79.00 lb.	82.60 lb.

A good many years ago Mr. Cantlie made the assertion that a Londoner of the fourth generation did not exist, and I am not aware that his challenge has been taken up. He meant, I take it, that after the third intermarriage among London-born people the union was sterile or the infants did not survive. Mr. Wilson, H.M. Inspector of Factories and Workshops, appears to maintain that in Dundee there is a race of degenerates. He told the Committee on Physical Deterioration:

The present race of mill workers in Dundee are the descendants of generations of operatives, there being little intermarriage in this class with persons of rural origin.

As to the cause of deterioration, he said:

Many of these children are born and brought up in single and double-roomed houses, or in large tenements, where the conditions of life are almost as unnatural and injurious as it is possible to imagine. Overcrowding often exists in conjunction with general squalor and intemperance on the part of one or both parents. Injudicious and unsuitable feeding during the susceptible period of infancy, exposure to inclement weather, and general neglect appear to be largely the cause of infantile deaths, and the children who survive seem to suffer more or less from weak constitutions throughout life. The latter class are often very short and far below the normal standard in weight. Undoubtedly, factory life, although not specially injurious to workers who have naturally strong constitutions, or who commence labour after having reached maturity, nevertheless neither fosters growth nor development, and has a distinctly harmful effect on undersized or badly-nourished young persons. Thus I have frequently conversed with full-grown men of 20 years and upwards who do not stand more than 5 ft. or 5 ft. 1 in. in height, and who scale less than 9 st. These men have not the physical strength for heavy manual labour, or indeed any task which demands prolonged efforts, but must accept unskilled labourer's wages in mills or factories all their lives.

Table II contrasts the height and weight of boys employed in Dundee jute mills in 1899, with the averages of the Anthropometric Committee:

TABLE II.—Height and Weight of Boys in Dundee Jute Mills (1900).

Ages.	—	Dundee, 1900.	Anthropometric Committee, 1882-3.	
			Artisans.	General.
11	Height	50.0 in.	52.68 in.	53.50 in.
	Weight	62.8 lb.	69.00 lb.	72.00 lb.
12	Height	52.75 in.	53.72 in.	54.99 in.
	Weight	63.5 lb.	73.0 lb.	76.70 lb.
13	Height	53.50 in.	55.81 in.	56.91 in.
	Weight	68.90 lb.	79.00 lb.	82.60 lb.
14	Height	54.0 in.	58.61 in.	59.33 in.
	Weight	70.5 lb.	87.3 lb.	92.0 lb.