

Auch der russische General Ivan Petrovitch Liprandi, von Geburt Italiener, gibt uns interessante Auskünfte. Er kommandierte in den Jahren 1828-1829, zur Zeit des Feldzugs des russischen Generals Dibitch auf dem Balkan, eine Abteilung Bulgaren im nordöstlichen Bulgarien, im Deliorman. In seinen Erinnerungen über die Bulgaren spricht er von den Gebräuchen der Bulgaren jenseits des Balkans, zu deren Lieblingsbeschäftigungen „die Rennen und das ‚djarid‘, dem sie besonders den Vorzug gaben“, gehörten.

„Dieses Spiel,“ sagt er, „wurde ihnen 1821, zur Zeit der griechischen Hetärie (griechische Freiheitsbewegung), verboten, wie auch das Waffentragen in zahlreichen anderen türkischen Gebieten zu jener Zeit untersagt war.“ Heute haben nur gewisse Bulgaren das Recht und die Erlaubnis, das Spiel zu üben, unter der Bedingung, daß sie mit den Türken<sup>11)</sup> zusammenspielen.

Es ist interessant, festzustellen, daß von dem zur Zeit des Ausbruchs der griechischen Freiheitsbewegung für die Bulgaren und die Christen im allgemeinen erlassenen Verbot, das „djarid“ zu spielen, nur General Liprandi spricht. Es war eine allgemeine Maßnahme, denn man weiß, daß nach dem ersten Drittel des vergangenen Jahrhunderts jegliche Unterlagen über die Pflege des Djarid-Spiels durch unsere Landsleute allein fehlen.

Mit der Unterbindung des Djarid-Spiels durch den Hof des Sultans beginnt es zu verschwinden. Später verbreitet sich das Spiel in Klein-Asien bei den Türken, was durch die früher genannten Verfasser festgestellt ist. Während des Sommers 1939 fand in Ankara unter dem Vorsitz des Innenministers und Generalsekretärs der Türkischen Nationalen Partei, Chucru Kaya, ein Kongreß statt, dem die Führer der Sportorganisationen von Ankara beiwohnten. Neben einer Reihe von Entscheidungen über verschiedene sportliche Fragen hat der Kongreß die Wiedererweckung des alten Djarid-Spiels, „eines der ältesten und volkstümlichsten Spiele“, beschlossen.

Wie dem auch sei, es besteht kein Zweifel, daß das Djarid-Spiel vor mehr als hundert Jahren von den Bulgaren gepflegt wurde. Die Unterlagen, die wir hierüber besitzen, sind völlig überzeugend.

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## Problems of the Modern Crawl

BY ROBERT J. H. KIPHUTH

Payne Whitney Gymnasium, Yale University, New Haven, Connecticut

Any discussion concerning problems of the modern crawl necessitates a preliminary historical background of the present day speed stroke in swimming. The modern speed stroke, the crawl, came into being at the beginning of the century and has slowly developed from that time to its present state.

The speed stroke, which was used just previous to the crawl, the "trudgeon", in which the arms were recovered out of water in alternate rhythm and the leg drive consisted of a single scissors kick, gave way to the flatter body position of the Australian crawl in which the action of the arms was pretty much the same as in the "trudgeon" but in which stroke there was a radical departure in that the legs executed an up-and-down motion. There were two down beats of the legs to a full cycle of the arms and from that early beginning there has been development of the stroke with resultant increase in speed ever since, as a study of the records will show. These records are accurately kept and available through the offices of the International Swimming Federation. It is also interesting to note that the supremacy and high standard of performance in crawl swimming has not been the province of any one nation or even any single continent, but has moved practically all over the face of the earth. With its beginning in Australia it moved to the United States and Canada, then scuttled back to

Hawaii, then to Europe and back again to the east, to Japan, so that now the present day great swimmers and great national teams can be found scattered all over the globe.

Of course, these trends in development haven't followed a distinct or isolated pattern but in general this outline indicates some what the place and time developed. At first the body position in the water, flat on the chest with the face down, and the up-and-down thresh of the legs exacted a terrific toll of energy so that the stroke could be used only over short distances but with practice and usage it became easier to swim greater distances. Following this beginning, came the increase in the number of leg kicks, measured by the down beat, to a four-beat crawl and then to a six-beat crawl, which is the standardized stroke of the present day. In this transition from the two-beat to the six-beat crawl, however, accommodation was made for the requirements of the strenuous effort necessary in the leg beats by a modification of the kicks, in that some of the beats were more strenuous than others. There was a strong accented beat in the so-called American "trudge crawl" at the recovery of one of the arms and the catch of the other arm, some swimmers accenting the leg beat on both sides of the body, others only accenting one side. This style was termed the American double-beat trudge crawl and the American single-major trudge crawl. The purpose of the accent and the widening of the kick as the body rolled in breathing and recovery of the arms, was to get the major part of the leg propulsion with a wider opening of the legs, the kick resembling a small scissors kick; then two kicks of smaller range to provide rest when the face was down; and then a widening again when the other arm recovered; and so the process was repeated.

These accommodations all along the line were made to enable swimmers slowly to build up to the ever increasing demand on the body by the developments in stroke efficiency. Naturally six beats of the legs gave more propulsive power than two and four but, in consequence, demanded more output of energy.

With the ever increasing facility that swimmers have developed in this more or less unnatural water medium and the increase in interest in the crawl and opportunities to engage in the sport both indoors and outdoors, the stroke has further developed to the point where the leg drive consists of beats of even tempo with resultant increased propulsive efficiency. At the present time the modern crawl presents the following picture: the swimmer lies flat on the chest with face down, the arms pulling alternately from a position overhead in line with the shoulder directly downward and backward through an arc, roughly of 180 degrees, and the legs in the meantime kicking alternately up and down in a loose, whipping action with beats of equal power six times to the right and left arm cycle.

This picture of the stroke is merely a rough broad outline and there have been many variations and much experimental work done since the present set of the stroke which, roughly stated, goes back to about 1920, as far as the world status of speed swimming is concerned. Practically all of the emphasis on the stroke has been to eliminate, if possible, friction and resistance.

One of the attempts to overcome this has been to change the timing of the breathing. Almost from the beginning of the modern stroke the standard has been one breath to a cycle of the arms, with the exhalation under water while the body is flat and the inhalation taken with

a quick turn of the head either right or left to get the mouth clear of the water. Ideally this should be done without any tipping of the shoulders or distortion of the body or hips, but practically this is almost impossible. Following the 1928 Games in Amsterdam the Europeans, especially the French swimmers, tried a breathing tempo of one breath to every third arm stroke instead of every second, thereby decreasing the head turning by one-third, and for approximately four to six years this innovation was tried with varying success. The leading exponent, Jean Taris, broke many world's records and came within an eyelash of winning the world's 400 meter Free Style title at Los Angeles in 1932. The Hungarians, I believe, also experimented quite a bit with this innovation but the technique is seen less and less as time goes on, probably due to the fact that the less frequent breathing makes it impossible to get enough oxygen.

In the matter of body balance in the water there has been experimentation also. In the beginning of the crawl the body position, especially of head, chest and shoulders, was apt to be high because the stroke was used only over the shorter distances. This style came to its most efficient realization in the styles of Weismuller, the American, and Borg, the European, Borg swimming a bit higher than Weismuller. Following the Los Angeles Games the Americans, taking the lead from the Kalili brothers and Crabbe of Hawaii, assumed a flatter position in the water with a longer reach of the arms and a higher position of the legs, but the present trend of the Americans is to go back to a little higher chest position "a la Weismuller", a style favored by the Europeans as well. The Japanese modeled their stroke on a combination of the Borg and Weismuller styles, riding a little higher than Weismuller and a little flatter than Borg, a style favorable mechanically to the Japanese physique.

Through the years the style of the arms has not changed a great deal. The action is an alternate one so that one arm is pulling while the other is in process of finish, recovery and catch, making for a fairly even distribution of arm propulsion. It is possible for the arm to pull from a position fully extended overhead downward and backward through a 180 degree arc, finishing at the thigh. Whether or not this complete range of 180 degrees should be utilized has always been open to question. There is an opinion that from the standpoint of mechanics the middle half of the arc represents the most efficient range of pull and that the first 45 degrees of the arc, as well as the end 45 degrees, should be eliminated if possible by a short catch and early recovery. This is at present, I believe, the Japanese theory, whereas the Americans and Europeans feel a longer catch and the longer pull through are more desirable. A slightly flexed elbow in the propulsion phase will shorten the catch as well as the recovery from 5 to 10 degrees and this style is favored by the Americans and Europeans as contrasted with the somewhat shorter catch of the Japanese, and is one of the minor differences to be worked out by experience.

The style of the legs, as has been stated before, has gone from the crude "two-beat" bent knee kick of the Australian crawl to the present day even tempo six-beat crawl, and through this phase of the stroke has come the greatest advance in the modern crawl. The ideal kick at present is a loose, whippy, undulating up-and-down action of the legs with propulsion coming from the up beat as well as the down beat. However, in the Japanese style more power comes from the down beat than from the up beat due to a greater knee action.

Roughly, the above indicates the style and the technique of the crawl at the present time. What, then, are its problems? The writer feels that it is one of refinement of style and attainment of the present ideal of the stroke. Because of the comparatively recent beginnings of the stroke and the phenomenal advancement of the technique, swimmers have not been able to keep pace with the developments. This is largely due to the rapid advance in development of stroke and especially to the lack of adequate facilities for practice. Most swimming critics, I believe, would agree that there is evidence to support such an opinion on every hand in the great lack of stylists. It seems to the writer, having had considerable experience through travel the world over, through observation of and contact with swimmers, authorities, and critics that what is needed is not so much an advance in technique as an opportunity to enjoy and practice this outstanding activity. It is true that tremendous advances have been made in the speed stroke since the turn of the century, but efforts should be directed along the lines of getting more people to swim by providing extensive facilities, both indoors and outdoors. The more opportunity there is to engage in activity in the water, the greater will be the resultant facility and skill of swimmers generally.

With all the advances that have been made the possibilities of the present-day stroke have hardly begun to be realized due to the crudeness of the techniques of even the best swimmers compared with the ideal inherent in the modern crawl. The comparatively unusual skill of the present day crawl swimmers is due to the teaching of boys and girls at an earlier age than formerly. In the early years of life this can be accomplished much more easily than in maturity; and in swimming the flexibility that goes with childhood and youth is this sport's greatest single asset. The swimmer cannot begin too early in life.

It should be the effort of the Physical Education world in general and the swimming world in particular, to make it possible for people as a whole to have greater opportunity for the practice and enjoyment of swimming through the increase in number of indoor and outdoor swimming baths and the raising of standards of coaching and teaching.

The primary need of crawl stroke swimming is the absorption and utilization to the fullest of the present swimming style by more swimmers in more pools and baths.

## **Die Probleme des modernen Kraulschwimmens**

Von Robert J. H. Kiphuth

Payne Whitney Gymnasium, Yale University, New Haven, Connecticut.

Jede Erörterung über die Probleme des modernen Kraulens macht einen Rückblick auf die geschichtliche Entwicklung unseres heutigen Schnellschwimmens notwendig. Das moderne Schnellschwimmen, das Kraulen, entstand zu Beginn des Jahrhunderts und entwickelte sich dann langsam zu seiner jetzigen Form. Das Schnellschwimmen, das vor dem Kraulen gebräuchlich war, das sogenannte „trudgeon“, bei dem die Arme abwechselnd aus dem Wasser gebracht wurden und der Beinschlag aus einem einfachen Scherenstoß bestand, machte der flacheren Körperlage des australischen Kraulens Platz, bei dem die Armarbeit zwar fast die gleiche war wie beim „trudgeon“, während die der Beine ganz wesentlich abwich insofern, als diese eine Auf- und Abwärtsbewegung ausführten. Auf einen vollen Armkreis kamen zwei Abwärtsbewegungen. Von jenen ersten Anfängen an entwickelte sich der Stil weiter. Das Ergebnis war eine immer