

THE EDUCATIONAL AND RECREATIONAL VALUE OF SWIMMING
IN TEXAS AS REVEALED BY THE MUNICIPAL
AND EDUCATIONAL INSTITUTIONS

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TABLE OF CONTENTS

	Page
LIST OF TABLES	v
Chapter	
I. INTRODUCTION	1
II. REVIEW OF LITERATURE RELATIVE TO THE EXTENT AND PLACE OF SWIMMING IN MODERN LIFE	6
Historical Aspects of Swimming	
Changes in Attitude	
The Place of Swimming in Modern Life	
Swimming in Public Schools and Colleges	
Swimming as a Remedy for Physical Dis- ability	
Consensus of Opinions on the Value of Swim- ming as a Recreational and Educational Activity	
III. SWIMMING IN PUBLIC SCHOOLS	52
Extent	
Need of more Facilities	
Demand	
IV. SWIMMING IN COLLEGE	57
Extent	
Summary	
V. SWIMMING UNDER SUPERVISION OF NATIONAL AND PRIVATE ORGANIZATIONS	61
City Recreation Departments	
Y. M. C. A.'s	
American National Red Cross	
VI. SWIMMING IN PRIVATE, PUBLIC, AND MUNICIPAL POOLS	80
Climate	
Facilities in Texas	
Comparison of Lists of Pools from Different State Health Departments	
Data Concerning Adult Swimming	

Chapter	Page
VII. GENERAL CONCLUSION	99
APPENDIX	104
BIBLIOGRAPHY ,	117

LIST OF TABLES

Table	Page
1. Data on Number of Pools in Each Locality in Texas and Per Cent of Total Number of Pools . .	62
2. Number of Days with Temperature of 32 Degrees or Less	81
3. Monthly Maximum Temperature by Years, the Mean of the Maximum Temperature by Years and by Months, and the Mean of the Maximum Temperature over a Period of Six Years from 1931 to 1936, Inclusive	81
4. Number of Days of Northers Per Month and Year . .	83
5. Number of Clear Days Per Month and Per Year . . .	83
6. Monthly and Annual Precipitation in Inches . . .	84
7. Total Amount of Snowfall by Years	84
8. Statistical Data of Texas Temperature, Frost, Wind Velocity, and Extreme Rainfall	87
9. Swimming Facilities under State Health Departments of the U. S.	89
10. Rank of States According to the Number of Facilities, Average Area to one Pool, and Average Number of Persons to one Pool	90
11. Information in Regard to Women Who Swim	94
12. Distribution of Approximate ages of 100 Men Answering this Questionnaire	95
13. Information in Regard to Adult Men Who Swam . . .	96
14. Distribution of Approximate ages of 100 Women Answering this Questionnaire	97

CHAPTER I

INTRODUCTION

Swimming, in our modern civilization, is more of an acquired ability than a natural aptitude. We know that primitive people swam easily. The age-old instincts of self-preservation and protection most certainly supply the incentive. This accomplishment helped them to survive in an unfriendly world. The early civilizations were cradled along important water ways and swimming was considered a requisite for education. It was a fine art to be encouraged and promoted.

Where nature has provided adequate and attractive bathing places, we find that watermanship assumes an important place in the lives of the people inhabiting such regions. Swimming can only be regarded as a minor activity, of little speculation, interest or importance by others not so fortunately situated.

Since the turn of the twentieth century, swimming has been a constantly growing form of exercise, recreation, and skill. This was necessary with our markedly increasing avidity for educational growth and development, our zeal for sports and all competitive forms of entertainment and achievement.

The State of Texas, with its many miles of sea-coast,

its mighty river boundaries and abundance of smaller streams, lakes and natural springs, should provide a stimulating locality for this increasing interest in aquatic forms of exercise and recreation. The recent tremendous strides in educational development in Texas, should mean also an awakening interest in aquatics and other sports. It should contribute to the spread and progress of this enlivened participation in watermanship with a more specific planning and use of plant equipment and increased personnel.

The purpose of this study was undertaken first, to determine, in so far as possible, the extent of the growing popularity of swimming throughout Texas; second, to discover what provisions were being made to meet the new demands for more adequate facilities and instruction; third, to reveal the extent of swimming participation in the state; fourth, to reveal data showing the extent and kind of swimming facilities in the state; and fifth, to evaluate the data found.

Very often the method of attack is the determining factor in the successful solution of a problem. In such a study as this, a knowledge of the method of procedure is necessary for a proper estimate of the reliability of the data and the validity of whatever conclusions that may be drawn from the data as organized.

In this study six factors are to be considered:

1. The place of swimming in modern life
2. Swimming in public schools and colleges in Texas

3. Swimming as a remedy for physical disability
4. Consensus of opinions on the value of swimming as a recreational and educational activity.
5. Swimming under supervision of national and private organizations
6. Swimming in private, public and municipal pools

If these factors are found to be significant in this study it is believed that the method of procedure used can be applied to administrators in solving a like problem in a similar situation.

The report of this study contains five chapters in addition to the first or introductory chapter and the last chapter or conclusion, making a total of seven chapters. In Chapter II are given the literature concerning the history, changes in attitudes, the place of swimming in modern life, swimming in our schools and colleges, the remedial possibilities of swimming, and the consensus of opinion on the value of swimming as a recreational and educational activity. The extent of swimming in our schools, the present needs, and demands are set forth in Chapter III. The extent, and summary of swimming in our Texas colleges are given in Chapter IV. Swimming under the supervision of national and private organizations such as The American National Red Cross, the Y. M. C. A., and the City Recreational Departments is given in Chapter V. In Chapter VI swimming in private, public, and municipal pools is discussed and in addition the climate,

the facilities in Texas, the comparison of pools of the State Health Department, the lack of reliable and definite statistics on participation and the data concerning adult swimming are given. The conclusions of the entire study are given in Chapter VII.

The writer endeavored to gather information for this study, (1) by the use of literature on the subject, (2) personal interviews and (3) questionnaire. He has tried to assemble certain statistics for analysis, and to examine the situation as it appears today. This was done in order to reach and present conclusions that would be of some specific value to those who were interested or concerned in the advancement of swimming.

The literature on the subject was briefly outlined in Chapter II. Facts from this source pertinent to the subject were indeed meager. Personal interviews with members of the State Health Department, Physical Education Directors and instructors, and Leaders in Recreational Departments proved helpful in discovering proper sources of information and statistics.

To gain ideas and information as to the extent, purpose and popularity of watermanship in Texas, questionnaires were sent to the following organizations which sponsor swimming, (1) public schools, (2) colleges, (3) Y. M. C. A.'s, (4) country clubs, (5) military posts, (6) municipal organizations, and (7) private organizations. Tabulation sheets

were made from the information received from the questionnaires, thus making these statistics easily examined and analyzed.

In making this study, it was hoped that it would be of interest and informational to curricular writers, to physical education instructors, and to public school authorities.

Curricula writers, who strived to base their outlines of activities and teaching work on student interest and desires, could no doubt use the evidence presented in this thesis.

Many embryonic physical education teachers are graduated yearly from our colleges. The person interested primarily in swimming is apt to wonder as to what possibilities there will be for teaching this particular branch of physical education. The findings of this study might tend to discourage such teachers from specializing in an activity for which adequate facilities are a rare occurrence in the public schools at this time. However, the realization of the slim prospects for teaching swimming under ideal circumstances and situations may aid in securing better cooperation between municipal authorities and pool owners and the public school authorities, for the benefit of teachers and school children.

CHAPTER II

REVIEW OF LITERATURE RELATING TO THE EXTENT AND PLACE OF SWIMMING IN MODERN LIFE

The art of watermanship has made tremendous strides in the past few years, but, although Americans have contributed largely to the development, particularly in swimming, there is an almost total lack of up-to-date literature to fill the steadily increasing demands for accurate and specific information.¹

This statement by Handley, the author of a well-known and popular book on swimming methods, sums up the true extent of literature in this particular field. Books on swimming methods are comparatively plentiful. Francis A. Greenwood,² instructor at the University of Alabama, lists in her bibliography on Swimming, Diving and Water Sports sixty-one books directly concerned with the methods of teaching swimming. In checking the literature in this field no attempt was made to review these numerous teaching texts, except for material directly related to this study. However, some few books of this classification offered interesting excerpts on the history and background of swimming.

Statistical information concerning the extent of swim-

¹L. De B. Handley, Swimming and Watermanship, Introduction.

²Francis A. Greenwood, Swimming, Diving and Water Sports, a Bibliography and guide to Equipment and Supplies, Sec. 1.

ming in educational institutions and the number of swimming facilities throughout the country was not available. Many magazine articles gave piece-meal statistics for a certain city, district or locality. The annual report of the National Recreation Association made a valuable summary of the work done under the supervision of the municipal departments.³

One section of this report gave specific data for each department in each state. In this manner some comparison was drawn between items and facilities listed for each recreational organization. This annual report is the only written material on the subject of swimming participation and facilities dealing with Texas.

Historical Aspects of Swimming

In the days before mechanics and artificialities, man lived close to the earth. He was compelled to adjust himself to natural situations. Since water is one of nature's most useful and abundant phenomena it has been an important, influencing factor in the progress of man's habits and living. It would be interesting to know the feelings and reactions of the first swimmer, especially if the swim had been in salt water. Did it come about through accident or design? Did the attempt to swim arise from curiosity or necessity? These questions are of course unanswerable. However, we know that aboriginal man did propel himself through water.

³Recreation Magazine, Vol. 23, p. 91, May, 1935.

Uncivilized tribes existing today are a fairly adequate criteria for ascertaining natural aptitudes and abilities for watermanship.

Primitive people seemed to have learned the art of swimming for the utilitarian purposes of fishing and safety from attack. Charles Russell⁴ in his book, Bodily Strength and Skill, gives vivid accounts of the Florida Indians retreating through the swamps and lakes before the invading Spaniards. Three warriors were reputed to have fought their persecutors from the water ". . . for thirty hours without taking food."⁵ The prodigious endurance and apparently unbelievable feats of these Indians, while resisting the Spaniards, caused the invaders considerable wonder and admiration. The Indians seemed to have used these methods of aquatic warfare for centuries. This ability, no doubt, had developed from the climatic and territorial peculiarities of the peninsular swamps.

Diving, among the primitive tribes, was also found to be a source of recreation and livelihood. Even today South Sea Island natives are famed for their ability in deep water diving. Pearl, oyster, and sponge industries were at one time maintained entirely through the use of native divers. Russell, in his accounts of divers, reported the following incident which occurred during Captain Cook's second trip

⁴Charles Russell, Bodily Strength and Skill, pp. 190-225.

⁵Ibid., p. 206.

around the world.

In this fairy scene and in these tranquil waters a number of young Tahitian girls were soon seen disporting themselves, their naked breasts and disheveled hair making them look like syrens, whom, indeed, they revailed in their beauty and tastes. They soon came swimming enticingly around the ship, diving into the sea to pick up glass beads or other trifles, thrown to them from the deck. It was not with the intention of inducing them to show off their powers as swimmers that in the first instance the ornaments were flung to them. One of the officers, in handing some trifling articles to a child six years of age, happened to let them fall into the sea, when the youngster, at once leaping out of the canoe, dived for them, and reappeared with them in a few seconds. Observing the feat with astonishment and wishing to see further proofs of the expertness of the natives, the officer threw down several ornaments.

A multitude of men and women amused the sailors by their astonishing performance in the water, not only catching glass beads flung at them, but also great nails, which, before they could be seized by the divers, must, from their weight, have sunk a considerable distance.

Some remained so long in the water, that the English could scarcely help regarding them as amphibious.⁶

The story continues:

The South Sea Islanders were just as much at their ease when . . . they found themselves in stormy waters . . . Cook had never yet seen such tremendous billows, and says that it would have been impossible for their boats to have lived in such a sea, while even the most able European swimmer would infallibly have perished, --but the Tahitians seemed perfectly at home in the raging elements, and when the waves rushed down upon them they dived through them and came up on the other side with incredible ease ability.

Barbarous hordes that invaded the Roman Empire were, on the whole, primitive and savage groups. These also were excellent swimmers, particularly the Germans. As infants they were plunged into a river once a day,

⁶Charles Russell, Bodily Strength and Skill, pp. 209-210.

'to harden them,' and to immunize them against the 'cold and black winds.'

Emmett A. Rice, in his Brief History of Physical Education in referring to primitive societies says,

'Swimming is engaged in by nearly all.'⁸

We possess more specific and accurate proof that swimming played an important part in the Greek, Roman, Egyptian, Assyrian, and Hebrew civilizations. Mural decorations, hieroglyphics, legends, myths, literature, and monuments frequently depict the athletic activities of these people. Among these activities swimming was so important that Plato dictated, ". . . an ignorant man is one who cannot swim or read."⁹ The Babylonians once exiled people that did not know how to swim.¹⁰

These ancient civilizations were located around the Mediterranean Sea. The coast of this historical body of water dotted with islands is rugged and contains many inlets and bays. This in part, explains the necessity of water activity. Russell states that,

Formerly, as indeed at all times, the best swimmers were inhabitants of sea coast and islands, or people accustomed to traverse the ocean for the purpose of commerce.¹¹

⁷ Charles Russell, Body Strength and Skill, p. 198.

⁸ Emmett A. Rice, Brief History of Physical Education, p. 5.

⁹ Edith M. Gates, Health Through Leisure-Time Recreation, Chap. V.

¹⁰ L. and N. Sheffield, Swimming, p. 116.

The Golden Age of Greece has engaged the attention of the world more than any other age of civilization. It has influenced government, law, literature, architecture, language, customs, ideals, and countless other phases of life and living. The Greeks were intensely interested in physical prowess and development because they played an important part in their educational programs. They were proud of their skill in sports, and swimming was not the least of these activities and sports in which they engaged. The palestras (gymnasias) were "located on the banks of a stream where facilities for bathing and swimming might be had."¹² The Athenians, especially the inhabitants of the isles of Delos, were considered to be the best swimmers.¹³ The Spartan method of training included swimming as a part of their rigorous educational system.¹⁴

Roman swimmers were no less at home in the water than their neighbors. Caesar was an excellent swimmer. At one time he saved his life in a seige at Alexandria by escaping into the water and swimming to safety.¹⁵

¹¹Charles Russell, Bodily Strength and Skill, p. 190.

¹²Emmett A. Rice, Brief History of Physical Education, p. 25.

¹³Russell, op. cit., p. 190.

¹⁴Rice, op. cit., p. 21.

¹⁵Russell, op. cit., p. 197.

The warriors were trained to swim, ". . . both naked and in armor, and in sham battles."¹⁶ Swimming was an essential part in the education of both men and women; and the women were not inferior to the men in this ability.¹⁷

Many hieroglyphic records, pictures and manuscripts remain to show the achievements of the Egyptian athletes and warriors. Thomas K. Cureton, in his review of the Historical Development of the Swimming Strokes, quotes Professor James E. Dunlap, Archaeologist at the University of Michigan, as follows:

The people of the Nile in Egypt, have left records of their achievements. A Nobleman of the Middle Kingdom (2160-1730 B. C.) proudly recorded that his children took swimming lessons with the children of the king.¹⁸

Another factor influencing the knowledge of swimming as a necessary art during this period is brought out by Russell.

The ancients did not practice the art of swimming for pleasure or for the benefit of their health alone, but also from a motive which had its origin in one of the principles of their religion. We know that peoples of antiquity dreaded above everything the deprivation of the honors of sepulture. The fear of perishing in the waves, and having no other tomb than the bottom of the sea or the bed of a river, impelled them to practice this exercise with more ardour and perseverance than modern swimmers,

¹⁶ Emmett A. Rice, Brief History of Physical Education, p. 25.

¹⁷ Charles Russell, Bodily Strength and Skill, p. 197.

¹⁸ Thomas K. Cureton, How to Teach Swimming, pp. 87-89.

who are not influenced by similar considerations.¹⁹

After the fall of these civilizations little can be learned concerning education or sports. The period immediately following was one of chaos and adjustment. The Chivalric Age of the Middle Ages, however, again presents a picture of intense physical training for war purposes. We read, "The spare moments of the squire were spent . . . in swarming with and without armor."²⁰ After this period came new interest in education. "Gymnasia" became a familiar word as many of the schools were so called.

In the middle of the sixteenth century Francis Rabelais wrote a satire on the educational practices of the day. Through this medium he presented his own ideas for an improved pedagogy. The book was entitled "The Life of Gargantua." Rabelais took pains that his ideal student should profit through physical as well as mental development. "Gargantua" learned to wrestle, run, jump and swim. Rabelais reports that, "He did swim in deep waters, on his face, on his back, sidewise, with all his body, with his feet only and with one hand in the air. . . . He dived into pits and pits and gulfs."²¹

¹⁹ Charles Russell, Bodily Strength and Skill, pp. 195-6.

²⁰ Emmett A. Rice, Brief History of Physical Education, p. 59.

²¹ Emmett A. Rice, Brief History of Physical Education, p. 76.

Catskill (1759-1839) taught swimming because "it is one of the most valued exercises."²²

We can readily see that the history of swimming has been synonymous with that of education. Its value as an exercise and its use as a safety measure is apparent from the very beginning.

Changes in Attitudes

The naturalistic and common sense ideals that prevailed during the golden era of Grecian civilization, and carried over through the days of the Roman Empire, were all but lost in the gaucheries of the so-called "Dark Ages". Civilization tottered on her throne. It was not until the days of the "Chivalric Age" that there emerged a brighter pattern in modes and manners. This lent a showy, scenic form to life and living. The extremes of artificiality and pretense took the place of naturalness and common sense.

Many ideas and ideals, colored by this same artificiality and pretense, have persisted through the centuries. They may be said to have furnished much of the framework for the manners and customs of subsequent years.

In the last century, however, marked changes have been taking place in our social attitudes and forms. There are, of course, many contributing factors. The "fevers" of war have even precipitated a people into new and different ways

²²Emmett A. Rice, Brief History of Physical Education, p. 91.

of thought and feeling and brought about radical changes in the scene and drama of everyday life. These restless, much-maligned modern times are but the natural aftermath of the titanic upheaval of the World War, the far-reaching effects of which we of today will never live to learn.

Many persons of today, however, can recall the first shivers of apprehension over the changes wrought by our own Civil War. A greater freedom and range of thought and activity followed the days of "65" all of which set the stage for the shocking days of the "Gay Nineties." In this decade emancipated woman came into her own and the golden glow of chivalry was to diminish with its numbered days.

Changes of style in dress which was definite have their origin in thoughts, manners, and customs of the time. The crinolines of Civil War days, the still voluminous dress of the early "thirties", the atrocities of huge sleeves, bustles, flaring skirts that enveloped and completely disguised the human form up to the "nineties", were to be discarded and replaced with much more simplified forms as this greater freedom was accepted.

Recreational activities are also much influenced and changed with the manners and customs of the "times". Less restriction in dress, for women, awakened a newer interest in the livelier sports. The charms of feminine helplessness and delicate invalidism were soon to become absolved. With a large physical freedom and relaxed inhibitions new ideals

were set toward a more natural beauty and the attractiveness of good health. Changing fashions favored the woman, and once again she stood a human being, in simple and revealing lines. There came about an easier and freer mingling of sexes. A fresh impetus was given to nearly all forms of diversions and skills.

This was the "new woman." With bifurcated skirts, a neat shirtwaist and a trim sailor fastened on her pompadoured tresses, a young woman could appear and play on a tennis court. The belle of the "Nineties" could don her "bloomer" costume and with her nattily attired gentleman escort mount a "bicycle built for two" and pedal away to their heart's content. Bathing, as it was called in the earlier days, became fashionable and popular. Even the delicately nurtured, lady-like female could enjoy a hitherto unknown camaraderie with members of the opposite sex and in new and daring attire disport herself at the beaches and "bathing pavilion".

We do not know to what extent women participated in swimming at first. It was almost entirely a man-and-boy prerogative. Doubtless the ladies lent only the charm of their appearance and responsibility of their presence when this form of diversion was in its early beginnings. But with the greater freedom came ambitions also and women wanted to learn watermanship and add the zest of competition to the recreation.

We do not know what women wore "in swimming" before the

innovation of the bathing suit and beach costume. The earliest bathing suits, while daring enough in those days, would appear to us as utterly grotesque and entirely too cumbersome for any practical purposes. Bathing corset, corset cover, full bloomers gathered into a band or ruffle at or near the ankles were undergarments over which went a dress, with full gathered skirt falling half-way below the knees, long-sleeved and highnecked waist gathered on to a yoke and belted in with the skirt at the waistline. Long, black stockings and high, laced, black shoes and a shirred "mob" cap were worn with this dress ensemble. The colors were dark blue or black; the materials were a light-weight wollen mixture that would be supposed to withstand the effects of water but made up in this fashion there is a wonder that any girl or woman could drag herself through or out of the water after her garments were wet. Beach costumes were not intended to be for practical purposes, even as today, they could achieve a more fanciful arrangement of decoration and design but the main features of the prevailing mode were adhered to. In time, the bloomers were shortened, as were the skirts to show just a little of the bloomers underneath; the neck-line was made slightly decollete and the sleeves became short puffs. But the long, black stockings and high, black shoes were necessary adjuncts. The men appeared on the beaches, for mixed bathing, in what looked like shirted long woolen winter underwear, but the length of sleeve or shirt and leg of these

suits was not arbitrarily prescribed.

The general ideal of bathing suit design remained nearly the same for a good many years. The heavier underclothes were discarded and the materials became lighter in weight, but the bloomers and full top dress were thought to achieve distinction for that type of garment.

The famous Annette Kellerman created something of a furor when she first went about this country lecturing on swimming and wearing a "one-piece" knitted bathing suit. For a professional it was thought practical but much too revealing for wear at the bathing beaches or in swimming pools. Even as late as 1925, Natalie Kneeland, in her Merchandise Manual; Sweaters and Bathing Suits, lists five styles;

- (a) 2-piece, with tights and suit
- (b) 3-piece, with trunks shirt and skirt
- (c) 2-piece, with jumper and trunks
- (d) 1-piece Annette Kellerman
- (e) Romper . . . ²³

These styles were knitted wear, except the rompers of denim or gingham, but the trunks or tights were much longer than we know them today and the necklines were higher, with sleeves or "caps" over the arms. Men, years ago, discarded their "long underwear" type of bathing suit and a pair of abbreviated shorts is today their only swimming garment. The term, "swim-suit," has been given to the latest type of bathing suit. They are made from the finest and lightest knit-

²⁴Natalie Kneeland, Merchandise Manual; Sweaters and Bathing Suits, p. 41.

wear and give the minimum of ease and convenience, with the minimum of "coverage".

Changes in the Methods of Teaching

There have been almost as many and as radical changes in the paraphernalia and methods of teaching swimming as in the bathing costumes and accessories. The following is an excerpt from a chapter by L. and N. Sheffield included in Edith M. Gates, Health Through Leisure-Time Recreation.

The history of swimming makes clear the numerous varied procedures that were at one time or another considered to be quite proper. In its early development, learning to swim was a hazardous sink-or-swim experience. Gradually trial and error gave way to crude systems of informal instruction and the use of strange supporting and paddling devices.²⁴

Many animals learn to swim naturally without special instruction because they float easily. Man, however, with larger limbs in proportion to his trunk, has more of a tendency to sink and usually will have to be told or shown how to keep himself up or move about easily in the water.

Thomas K. Cureton remarks that:

Practically all of the early methods of teaching swimming centered around individual instruction. Wyneman (1537) and Guts Muths (1798) considered the problem an individual one. Both the land drill and the water practice were arranged on this plan.²⁵

Many have been the contrivances designed for use in

²⁴Edith M. Gates, Health Through Leisure-Time Recreation, p. 115.

²⁵Thomas K. Cureton, How to Teach Swimming and Diving, p. 108.

learning how to swim. They always are for the individual. In the early days such devices were often complicated affairs, in the management of which, as likely as not, both instructor and pupil would be busily engaged during the lesson or practice. Some teachers were particularly strong for apparatus which was designed to help the swimmer in making his strokes on land. These usually were placed in the gymnasium and there the swimming lesson would be given.

In How to Teach Swimming and Diving²⁶ there is an illustration (XLII) which depicts a rather vicious-looking contrivance at one time used in land drill for teaching the breast stroke. This consisted of a skeleton framework set upon a flat base, for steadiness, while a double chair arrangement provided support for the body of the swimmer. It seems that the pupil crouched in position, and was upheld by the chains, with plenty of room to work his arms and legs through the uprights. Further in this connection Cureton says:

One of the favorite methods was that of placing the swimmer across a box or bench and then applying manual assistance both front and rear. One instructor would guide the feet and another the hands.

The trolley and belt idea came into use some time later. Instructions were given the pupil after attaching a belt

²⁶Thomas K. Cureton, How to Teach Swimming and Diving, p. 108.

²⁷Ibid.

around the waist to which was fastened a rope; this rope was passed through a swivel pulley operating like a trolley on another pulley. This swivel ran on a transverse cable, at a convenient height above the pool. The instructor held the end of the rope in his hand, and pulled the swimmer through the water. The learner, thus comfortable, supported at the proper level in the water, could concentrate on his stroke without any floundering about in a struggle to stay afloat. There were many and various schemes of this sort. In one ". . . a rope and belt hung from the wheel. The learner swam about in a prescribed place."²⁸ One English gentleman, it seems invented a device consisting of a small, square frame work which was supported by air bags. He was drowned while demonstrating this invention. After the trolley and belt system was worked out more simplified forms were evolved.

According to Thomas K. Cureton:

The teachers pole was widely used in individual instruction. It is simply a pole six or seven feet long and one and one-half to two inches in diameter, to which is attached a rope and belt. It is only a modification of Warner's pulley. It is useful in deep tanks.²⁹

From this pole and belt idea it was only another step to the pole with an attached "hook" at one end, looking very

²⁸Thomas K. Cureton, How to Teach Swimming and Diving, p. 109.

²⁹Ibid., p. 110.

much like a shepherd's crook. This was used to ease a person into the water when they were first trying to dive. A "shepherd's crook" is seen at a few pools today, but it is used as a "rescue pole."

It is interesting to note the numerous and diverse contrivances that men have planned and tried out to enable them to travel about in the water. Strange shoes with flaps on them; webbed gloves; air gloves; a flexible "tail" that moved to and fro, from side to side, by alternate motions of the legs; plates affixed to the hands and feet; bladders and floats of many kinds were used to help man swim. These devices were almost all failures. These attempts to use artificial mechanical aids for the individual only put off from time to time more practical methods of mass instruction. "Teachers need to know the evolution of teaching methods so as to have a broad perspective of their problems."³⁰

This principle applies whether the instruction is being given to an individual or to groups. The system originated by Dr. B. Dean Brink is the first mass method of teaching swimming that has achieved popularity.

Cureton says,

This method is based upon the psychological principle that, to combat fear with which non-swimmers are afflicted, there must be submitted mind-pictures which will occupy their minds completely.³¹

³⁰Thomas K. Cureton, How to Teach Swimming and Diving, p. 130.

³¹Ibid., p. 132.

In our modern methods of teaching swimming there is no attempt to have the learner rely on artificial help. Individual instruction has given way to mass methods. It is an accepted axiom that progression should be from the simple elements to the more complex and difficult ones. Today enough progress has been made to "place swimming and diving instruction on a real educational and scientific basis."³²

Place of Swimming in Modern Life

Our modern civilization has reached the highest level of any civilization known to man. Scientists and inventors have made the era one of benefit to the masses. Better living conditions, better working conditions, better educational status, easier and quicker exchange of ideas, increasing means of transportation and a growing leisure are the heritage of the masses today. However much we may enjoy and appreciate these advantages and marvel at our progress, we must reflect that civilization does not stand still. Scientists are continually striving to solve the riddle of the universe and the origin of life. Inventors are constantly working out their theories and ideas into practical appliances. Therefore education must keep pace if the full value of these other achievements are experienced.

Of education, Agnes R. Wayman has this to say, "Education for the Future? Who knows what it will be for?"³³

³²Thomas K. Cureton, How to Teach Swimming and Diving, p. 132.

Despite changes in living, ideas, education and recreation man still swims.

In recent years swimming has enjoyed a rapidly growing popularity owing to the increase of public beaches and pools, and the amazing development of camping. As a consequence boys and girls of school age are receiving expert instruction. The spectator interest in swimming competition has grown to the point where the entire world over, swimming stadiums are being built to accompany the other facilities of this enjoyable sport--enjoyable to both the swimmer and the spectator.³⁴

In Sports for Recreation we find the following:

The exercise which brings brain, body and soul into true relation. The more enjoyable a bath is, the better it is, and though light has often been called the best tonic, it is dull and impotent compared to happiness, which is the best tonic of all for old or young, well or ill.

Anyone can learn to swim and everyone should. It is not difficult; it is enjoyed by everyone who can do it. It is the exercise of swimming, and the swimmer's encounter with the water, that gives an essential part of its complete value to open water bathing. It is the mental factor of swimming that counts; the exhilaration and stimulation and sense of fitness and self-confidence that come from our transcendent mastery over the magnificent and immeasurable forces that surround us.³⁵

Modern life has affected this age-old art by depleting it of some of its uses and adding scientific values. We no longer need to learn to swim "with armor and without"; no longer need we be concerned with its purely utilitarian outcomes. Swimming, today, has a definite place in life as a

³³ Agnes R. Wayman, Education Through Physical Education, p. 235.

³⁴ A. A. James, John Johnson, E. D. Mitchell, Earl H. Respey, and R. W. Webster, Sports for Recreation. p. 253

³⁵ Ibid.

recreational activity contributing to physical development and pleasure.

Three factors of this modern period may be said to influence directly swimming participation. These are: first, the rise in importance in recent years of physical education programs; second, the increased means of transportation; and third, a more universal knowledge of swimming.

The rise of importance of physical education in recent years is the outgrowth of a period of gradually changing conditions of living. City life is not a natural environment for one to lead. The sedentary occupations, recreations and habits of today are not entirely compatible with man's physical development. From such conditions the realization that some means of education should evolve to aid and direct proper physical growth, "Physical Education" is the answer to this demand. It has been suggested by one educator that since we are not prepared for war, or not prepared for peace, and have educated for a working world, we now have the opportunity to educate for a world of leisure.

Unfortunately, space in this thesis cannot be given to enumerate the many values of physical education. But at the present time it is rightly considered a vital part of any educational program. Whether it will always be considered as such might be a point of conjecture. The above named author in the following quotation gives an interesting thought on this subject:

Whether we (physical educators) are a fad or a fundamental, in order to meet this challenge of leisure, our physical education for the present must make its contribution toward equipping our youth, our boys and girls, with skills which can be used not only now but which can be used as they become men and women. We must teach activities which can be enjoyed alone, such as archery, golf, swimming, riding and skating; or which can be indulged in by twos and fours.³⁶

Increased means of transportation have affected present day recreation and leisure time activity more than any other contributing factor. Miles have become minutes through the use of automobiles, trains, airplanes and ocean liners. Europe is closer today than it has ever been. Recently a new liner crossed the Atlantic Ocean in a little more than four days.³⁷ Aeroplanes travel over two hundred miles an hour over regular passenger routes. Trains are sleek, slim streaks of alloy metal traveling over a hundred miles an hour. More important still is the fact that "Mr. and Mrs. Brown" and family can drive in their new car fifty miles an hour in as many minutes for an afternoon picnic.

Vacationists spend their two or three weeks' reprieves from work thousands of miles away from their places of business. They travel from the mountains to the sea, from the city to the country, from the East to the West and otherwise, where new surroundings, new faces, and new activities furnish added zest for living; by so doing they obtain their view-

³⁶Agnes R. Wayman, Education Through Physical Education, p. 235.

³⁷The "Normandie," a new French liner.

points. Thousands who do not live on the coast flock to the beaches, summer after summer. They learn to swim. They find they like to swim, and upon returning to their inland towns and cities they seek the use of artificial pools, and interest others in learning to swim.

A more universal knowledge of swimming, due to artificial facilities, is the most important factor for discussion in this study. It is interesting to note that the higher civilizations have always provided public artificial bathing facilities. The Romans, particularly, had elaborate baths. Ruins of these bathing places still show intricate and detailed design that mark them as buildings of beauty and importance. It has been found that these ancients had hot and cold water conducted to and from the pool through pipes and drains. Today, our artificial pools are reaching a higher level of use and beauty. The advantages of non-rusting pipes, feeding and draining pumps, chlorination and sanitary measures were not known in other eras. Indirect lighting, colored tiles, and marble add to the beauty of pools. Graduated depths allow people of all ages and degrees of ability to swim with safety and enjoyment.

Natural bathing places all over the country are being converted into semi-artificial pools. Artificial lights, concrete floors over mud bottoms, concrete ledges and walks around the "swimming hole" turn it into a clean, safe, well-planned and well-used beauty spot. Possibilities for a com-

bination of artificial and natural facilities are unlimited.

Interest in all forms of athletic sports and games, for recreation, for physical development, for health and skill is an integral part of American life today. If, as has been said, "competition is the life of trade," so also is it the mainspring of this growing popularity of athletics. Our daily newspapers, our periodicals, our new weeklies at the moving picture shows, our national advertising, the radio, and all forms of publicising feature brilliantly the many and various athletic competitions taking place daily all over the country. They announce, in clarion accents, the winners and the losers; they reveal records, made and broken; they proclaim the outstanding achievements of individuals and teams in their chosen fields. The American public awaits these verdicts with an intense interest, and an enthusiasm and a partnership that is not evinced, even in the major concerns of our national life.

The leisure time gained by the order of our economic and social systems contributes largely to this increasing opportunity and propensity for amusement and play. However, the greater number of persons involved does not necessarily indicate that there is enlarged participation by the masses, as might be expected. On the contrary, Jay B. Nash has this to say:

Every indication at the present time is that with excessive leisure men will turn out to be a spectator. Merely because it is the easiest thing. "Spectatoritis" has become almost synonymous with

Americanism. We are in the gladiatorial age of Rome, with few participants and many seats for the spectator.³⁸

While this may be true of most athletic activities in which we are interested today, it can hardly be said of swimming. Above all other sports, swimming can be participated in and enjoyed by any and all. It can be adapted to the means and proclivities of the masses, and to the individual as well; and our interest in championship achievement, so evident in many other sports as they are pursued today, should never be allowed to eclipse or interfere with individual endeavor in this field.

In the "Forward" to Water Pageants, Games and Stunts, we note the following:

The aquatic program in America should provide us with glorious adventure for many years to come if we can keep it colorful and glamorous and full of the play spirit. But if we over-emphasize speed and training for speed, water sports will become drudgery to the members of that large group who find themselves not among the championship aristocracy.³⁹

Men cannot grow by vicarious participation in exercise or sport. His survival will depend on his over interest and part in vigorous activities. Of these, swimming seems the best suited to his nature and needs.

Mrs. Igda Sheffield Mackie says, "Specifically, swimming should contribute to a well balanced personality by increas-

³⁸J. B. Wash, Administration of Physical Education, p. 126.

³⁹Oliver McCormick, Water Pageants, Games and Stunts, "Forward," by Wilbart Edmund Longfellow.

ing skills, knowledge, attitudes and the appreciation of social values."⁴⁰

Perhaps the greatest promise in the growth of swimming interest lies in its appeal as an individual undertaking in group participation. For a co-educational swimming program Mrs. Mackie suggests:

The swimming program should be so planned as to enrich in three ways the experience of the individual participating. First, it should satisfy physical requirements by having sufficient activity to meet the neuromuscular and organic needs; by giving adequate deep water emergency tests and a variety of swimming skill tests so as to insure safety; and by having the work done in a pool where high standards of sanitation are enforced and habits of personal hygiene are supervised. Second, it should satisfy mental needs; stimulate thinking; attach satisfaction to the desired outcomes; and by expanding the swimming recreative game, and dramatic activities, add to the enjoyment and aesthetic appreciation of the individual. Third, it should contribute definitely to the development of enriched social and moral standards.⁴¹

The growing popularity of swimming as a recreational sport and social exercise is evidenced everywhere today in the increasing demand for facilities, in the wide display of bathing and beach costumes and accessories, in the persistent dissemination of safety lore and the publicizing of safety measures, and in growing leisure-time participation by the masses. Francis A. Greenwood, in her Bibliography on Swimming, Diving and Water Sports, reports:

⁴⁰Lyda Sheffield Mackie, "Experiment in Co-Educational Swimming Instruction," Journal of Health and Physical Education, March 1932, Vol. III, No. 3, p. 23.

⁴¹Ibid.,

The National Recreation Association recently completed a survey of the leisure hours of 5,000 people. These people were asked, among other things, to list activities in the order which they liked to participate. By an overwhelming majority, swimming ranked first.⁴²

The place of swimming in modern life seems natural and its growth assured, but this will depend, in the main, upon proper instruction. Concerning this, T. W. Sheffield predicts:

The phenomenal interest taken in the subject by every country and public throughout the world during the last few years promises to make swimming an international movement for the everlasting benefit of humanity. The time will be when swimming will be recognized as the most perfect form of exercise for all-round physical development yet discovered in the athletic world.⁴³

Swimming in Public Schools and Colleges

The years of school age are most important. They affect the latter years of life to a great extent. Through schooling, from kindergarten to college graduation, foundations for our ideals, habits and skills are laid. Leisure-time activities are at present being greatly agitated throughout the educational world. Shorter working hours today are presenting problems which did not exist years ago. Twenty years from now, the child of today may face, as an adult, a four or five hour working day with a leisure time period

⁴²Francis A. Greenwood, Swimming, Diving and Water Sports, p. 36.

⁴³T. W. Sheffield, Swimming in all its Branches, Introduction.

three times as long. People must be taught to play as well as to work; for, as the old saying goes, "Satan finds mischief for idle hands to do." Activities learned in childhood should have possibilities for adult leisure.

Childish energies must be directed. Parents and teachers alike are faced with the problem of giving children worthwhile outlets for this activity of childhood. J. B. Nash, described this trait as being fundamentally biological. He says:

It is significant, biologically, that the child must choose one type of activity or another. He has no choice between activity and doing nothing for there is no doing nothing. The hereditary hand back of the child pushes him forward--it demands activity.⁴⁴

The same author states further that "If there is to be a large use of leisure it must be based upon wide participation of activities during the years of childhood."⁴⁵

However, if activities taught to children are entirely of the team game sort, there will be little carry-over. Lack of equipment, unfortunately, forces the use of games of low organization almost entirely in the elementary schools. Team games and sports are valuable for many reasons, but it is the individual activities that the boy will do as a man and that the girl will enjoy as a woman that are often neglected in our school program. Team games, such as baseball, foot-

⁴⁴J. B. Nash, "Leisure, for What?" Journal of Health and Physical Education, VI, (May 1935), No. 5, p. 12.

⁴⁵J. B. Nash, Administration of Physical Education, p.125

ball, soccer, hockey and basketball, are enjoyable and beneficial from the physical and psychological standpoint, but in which, with the exception of professional athletics, few adults ever participate. Baseball is perhaps an exception to this case. City recreation departments, through the use of artificially lighted fields, have made possible the use of baseball as an adult recreation.

The value of the service that physical education is contributing to child education could be increased if youngsters were trained in the skills of individual activities. Included in this category, activities should be such as may be performed alone or in very small groups, like archery, skating, hiking, horseback riding, and swimming.

C. F. L. Nichols, in discussing the teaching of swimming in elementary schools, says:

. . . The age attained by the average sixth grader is the time the elements of swimming are best learned and with the maximum facility. The proper degree of physical strength is now developed and it is usual to find that the retarding fears, which may come to the child as he grows older without acquiring the knowledge of swimming, are absent.⁴⁶

Very few of our schools are prepared to meet this ideal basic principle. Swimming in the elementary school in the United States, and certainly in Texas, is almost unknown. High Schools over the country fare slightly better, while in

⁴⁶C. F. L. Nichols, "Every Sixth Grade Pupil a Swimmer," Recreation Magazine, XXIV, (February 1931), No. 11, p. 26.

Texas we find few more than a dozen junior and senior high schools offering swimming as part of the physical education program. A larger percentage of colleges, however, are equipped to offer swimming to their students.

Generally speaking, swimming activities in the public schools are not available because of the cost of equipment. In the larger towns and cities, which already have municipally operated pools some agreement might possibly be made whereby the school could use these facilities for class instruction.

It is logical to believe that if such arrangements were made seasonal and fluctational participation, so dangerous to the pool owner or manager from a financial standpoint, could be met. Through such cooperation, opportunities could be given to countless school children for an enjoyable and valuable activity.

On the other hand, we have this suggestion from J. B. Nash. "The installation of a swimming pool (in elementary schools) could well be afforded, if it could be given wide community use during the evening and vacation periods."⁴⁷

In this manner night and summer vacation classes, for adults, in the school pools would give added impetus to swimming activities and furnish greater use of swimming equipment.

C. P. L. Nichols says:

⁴⁷J. B. Nash, Administration of Physical Education, p. 252

It is common to find that the elementary schools of the United States have not included swimming as an essential part of their physical equipment. Yet in England this is not the case. Speaking of physical education in the English schools, Henry S. Curtis says, "The ability to swim is an essential part of an Englishman's ideal of education. There are public swimming baths in all the large cities of England, and swimming is general. There were, in 1903, forty-six public swimming baths in London. To these the children are taken during the spring and fall by their regular teachers."⁴⁸

Howard Braucher, in an article entitled "Children First," says:

Even when men are unemployed and hungry, municipal playgrounds and recreation centers are kept up and open. One million dollars more was expended for recreation leadership in 1930, the year of business depression, than the year previous.

After all, taxpayers are first of all fathers and mothers of children and men and women who care for children.

Economy cannot well begin with the children. Children first always and forever. The future before the present, and a child is fully a child only so far as he plays that is the kind of being he is; that is the way he grows.

Children would rather play than eat--though they will do their share of eating later when the game is over.

In times of unemployment we need all the cheer we can get. We recognize that it is no time to rob children of any part of their childhood. More rather than less play is needed when morale must be kept.

Of course, you cannot have the best play for children unless you have fathers and mothers who keep smiling, who keep courageous, who keep playing themselves, who bring back into the home the spirit of play.⁴⁹

⁴⁸C. F. L. Nichols, "Every Sixth Grade Pupil a Swimmer," Recreation Magazine, XXIV (February 1931), No. 11, p. 26.

⁴⁹Howard Braucher, "Children First," Recreation Magazine, XXVI (May 1931), p. 205.

Mr. Braucher quotes Joy Elmer Morgan in the following:

In the face of danger or disaster on a sinking ship we should strike down anyone who attempted to save himself at the expense of a child. Children come first not only in sinking ships but in our hearts, our homes, our schools, and our churches. They are first. The race can save itself--can⁵⁰ lift itself higher--only as children are lifted up.

Swimming as a Remedy for Physical Disability

Aside from being a stimulating recreational activity for young and old, rich or poor, male or female, swimming can be the most beneficial to the health and well being of all the varied forms of sport and exercise. The physical exertion rightly controlled and directed builds up body strength and aids in proper development. This exercise performed in water, coupled with the fun of companionship and amid wholesome surroundings, is doubly effective in its application and results. While for the well and vigorous swimming provides stimulating play and pleasure, the sick and weak need not be excluded nor deprived of a full share of the benefits and enjoyments.

Water as a therapeutic agent has long been recognized and used in many ways. There have been discovered means of helping the sick and encouraging the afflicted to handle themselves in natural swimming or bathing pools, so that they too may participate in a form of physical exercise and benefit, as well as by the immersion in healing waters. Marjorie

⁵⁰Howard Braucher, "Children First," Recreation Magazine, XXV (May 1921), p. 205.

Camp has written:

Swimming has been called the most healthful of sports, and its values are recognized in the treatment of various diseases as well. Many hospitals now provide swimming facilities in their physiotherapy departments with beneficial results to the patient.⁵¹

In Francis A. Greenwood's Swimming, Diving and Water Sports appears the statement:

The American Medical Association recently recommended a daily swim for all nurses. They based this recommendation on the great relaxing powers of water and the exercise.⁵²

The physically handicapped individual may feel that activity, even in water, is not for him. T. W. Sheffield, however, says, "Many a man who cannot get along comfortably on land is at home in the water."⁵³

In Recreation Magazine, we read, ". . . Swimming has been instrumental in the rehabilitation, mentally and physically, of the handicapped individuals."⁵⁴

Cripples, victims of paralysis, neurotic invalids even persons with amputated limbs can learn to maintain themselves in water. In doing this, their pleasure and delight are far above the normal. Sheffield cites a case of a World War

er ⁵¹Marjorie Camp, "Swimming and Water Front Safety," Sports Woman, VI, (April 1935), No. 8, p. 12.

⁵²Francis A. Greenwood, Swimming, Diving and Water Sports, p. 73.

⁵³T. W. Sheffield, Swimming in All Its Branches, p. 167

⁵⁴H. Norman Angelson, "Value of Swimming as a Recreational Activity," Recreation Magazine, XXVI, (Nov. 1932), No. 8, p. 144.

veteran who had lost both legs, enjoying the use of the swimming pool and even diving from the high board.⁵⁵

We remember that Lord Byron suffered the affliction of a club foot. He had to use a cane to help himself about, yet, he was an expert swimmer. So interested did he become in the question, as to whether or not the babled Leander actually swam the Hellespont, across and back the same night, that he undertook to brave these turbulent water and successfully swam them more than once.

The true life story of Annette Kellerman is an inspiration to everyone who has the courage to live and conquer seeming miracles. From a weak, helpless and crippled child she developed into a young woman whose matchless perfection of form became as famed as her swimming abilities. Annette Kellerman was born in Australia and lived near the sea. Her sorrowing father would carry her down to the beach and let her lie in the salt water where he helped and encouraged her to try to use the withered little limbs. She gained strength. She gradually found herself able to move about in the buoyant waters. Annette Kellerman learned to swim. It became not only her keenest pleasure, but she made it her life work to go about the world, telling her story to others and giving exhibitions of types of swimming and diving that were the marvel of the age.

⁵⁵T. W. Sheffield, Swimming in All Its Branches, p. 169.

As Francis A. Greenwood has written, "The power of water and its carefully controlled use is unsurpassed as a restorer of paralyzed muscles, as a corrective agency for faulty body mechanics, as a builder of efficient bodies."⁵⁶

In Recreation Magazine, under the title "Swimming Their Way to Health," an article relates that:

. . . Learning to swim in a swimming pool has given back their "land legs" to three Louisville children, victims of infantile paralysis, and several others are gradually gaining the use of their limbs. At the advice of the physicians the children entered the free swimming classes conducted by the Louisville, Kentucky, Division of Recreation, where they were given special instruction. The classes are conducted in conjunction with mothers' class so that the mother of the child can learn to swim at the same time.⁵⁷

Franklin D. Roosevelt, President of the United States, as we all know, was a victim of infantile paralysis. His struggle against this handicap has become a "saga" of inspirational courage and cheerfulness. He has personally interested himself in many individual cases and rightfully has lent the power of his position and prestige to help hundreds afflicted with the dread malady. In Hygeia Magazine, issue of October, 1930, in speaking of this great work Edith Reeves Salenberger says:

Like so many needed health movements, the Warm Springs Foundation has a personal origin.

⁵⁶Francis A. Greenwood, Swimming, Diving and Other Sports, p. 58.

⁵⁷"Swimming Their Way to Health," Recreation Magazine, VIII (September 1935), No. 6, p. 304.

Franklin D. Roosevelt, now Governor of New York, (1930), was disabled by poliomyelitis in 1921. Three years later, in 1924, he chanced to hear of a young man in a similar condition who had spent three summers at Warm Springs, Ga. The young man had at first been assisted to the pool in a practically helpless condition. He soon found that he could move under the warm water the limbs that were helpless outside the water. Persistent exercise so increased his muscular strength that by the end of the third summer he was able to discard braces and walk with the help of one cane. ⁵⁸

The (then) Governor of New York made a trip to the Springs and was benefitted. The publicity of his visit and sojourn made them famous and many other patients seeking aid on recuperation were brought there.

In the last four or five years, with proceeds from his famous Birthday Ball, President Roosevelt has been able to carry forward a work which will be a lasting tribute to his own cheerful, patience and persistent courage.

Swimming might well be called the "sport of cripples." It cannot be said of any other sport or recreation that it reaches, or should reach, the teeming millions of our people, that it can be participated in by all, and that its pleasures and delight can be turned into incalculable benefits and results in better health, greater beauty and increased efficiency of our children, youths, men, and women. It is lamentably true, of course, that there are drownings, injuries, and harmful outcomes in the pursuit of this activity. A great many reasons can be found for these distressing even-

⁵⁸Edith Reeves Salenberger, "Warm Water Healing," Hygeia, VIII (October 1930), No. 10, p. 914.

qualities; however, swimming can be made safer when proper facilities and expert instructions are everywhere provided, and

Growing stronger and stronger,
we hear the challenging appeal of the
thousands of persons who naught be
almost remade by the careful
application of correct water treatment.

That appeal becomes clearer and clearer;
we hear the words of those boys and girls,
these men and women, as they dream of
the future--then make their call to the water.

Build me straight, O Worthy Master,
Staunch and strong, a goodly vessel
That shall laugh at all disaster,
And with wave and whirlwind wrestles.⁵⁹
(Longfellow)

In the very interesting book, Disabled Persons, by Sullivan and Kenneth, we find the causes of crippling condition to be:

The most comprehensive study is the very recent one of the International Society for Crippled Children, made in 1924. It represents data based on the cases of 6507 children. The causes were as follows:

Infantile paralysis	27.23%
Bone and joint tuberculosis	23.65%
Congenital deformities	13.15%
Rachitic	8.05%
Traumatic condition	4.20%
Osteomyelitis	3.67%
Other conditions	20.20%

In interpreting these percentages it must be remembered that they are derived from cases which were in institutions, 18 hospitals and 15 convalescent homes. The Ohio Department of Health reports a percentage of infantile paralysis cases as high as 41.20, based on 1125 clinical orthopedic diagnoses. The conclusion is probably safe that

⁵⁹ Francis A. Greenwood, Swimming, Diving and Water Sports, p. 58.

for the country at large infantile paralysis (polio-myelitis) is the chief cause that is making cripples of children. . . . A recent study of crippled children in Chicago made by the Chicago Community Trust for the Rotary Club also gives a striking proportion caused by infantile paralysis which is 51 per cent, but in addition calls attention to the size of another group, that caused by spastic paralysis, 16 per cent. It brings out, too, that 63 per cent of the causes were due to diseases, and 25 per cent were congenital. Another discovery of such importance made in this survey was that the onset of the crippling conditions in 53 per cent of the cases was in the age period between one and five years. When this 53 per cent is added to the 25 per cent crippled from birth, the need for early care is convincingly shown.⁶⁰

It would seem, therefore, that a very considerable reduction in the number of disabled persons is being made by the care and treatment of crippled children and can still be further extended by making facilities for such care and adequate treatment.

George W. Gorsan has this to say about the therapeutic value of swimming:

The rotary action of the body in swimming the various crawl strokes, and the trudgeon stroke, cause such a movement of the entire spine as to permit so free a flow of nerve force through the spinal channels as to be autochiropractic. The anterior-posterior, and the lateral movements of the spine, when the body is relaxed, and in the horizontal position in the water, are of enormous value to the growing child, especially to those who have been affected by infantile paralysis; such movements also surely develop a taller growth. A strong spine is of tremendous importance to everyone who wishes to live through life and accomplish a great deal. As the control of the body passes through the spine, and the pressure on the nerves emerging from the spine to the various organs affects greatly and

⁶⁰Oscar W. Sullivan and Shortum Kenneth, Disabled Persons, Their Education and Rehabilitation, p. 61-62.

sometimes totally interferes with the function of that organ or muscle and hence causes various diseases instead of ease. Crooked spines cause untold suffering in the world. Therefore, see that all growing children do a greater amount of swimming, and then if the food is right also, they cannot possibly grow crooked spines.

There is no doubt but that adults can, to a certain extent, benefit their spines by swimming, as the snakelike contortions of the body in twisting and turning are always taking place when one is active in the water. There are, without a doubt, far more spinal motions performed in swimming than in any other athletic activity.⁶¹

Mr. Corsan writes further:

Swimming is a vigorous offensive against physical deterioration. Swimming prevents crooked spine, round pelvic prohapsus and displacement in women, pot belly, narrow chest and shoulders, stiff joints, stiff muscles, clogged skin pores and skin diseases, self-centered thoughts and insanity, timidity, valvulus and intussusception, despondency, dry skin, splay and flat feet, flat chest, pigeon breast, and too oily skin.

In making this statement, I don't mean that anyone is to suppose that, ignoring diet, fresh air during the day, and in the bedroom during sleep, and other hygenic advice, swimming alone will prevent malformations, etc.⁶²

Dr. Charles L. Lowman has this to say about the value of the swimming pool:

Most discussions of the character of conditions treating pools, tanks and water-baths refer to some form of paralysis. Except in isolated instances, the poliomyelitis form of paralysis has comprised the bulk of cases which have been given exercises in the water.

About twelve years ago, hearing of Dr. De Kuee's method of ordering congenital hip cases to walk in water, we were led to study the effects of pool work on a variety of conditions other than of

⁶¹George H. Corsan, The Diving and Swimming Book, p. 139.

⁶²Ibid., p. 146-147.

the paralytic group. Polymyolitic cases fill rank first in number treated, and in order of frequency the general range of conditions treated stand about as follows:

Paralyses:

1. Flaccid (infantile paralysis) chronic and acute type.
2. Spastic (Little's Disease) or spastic paralysis type.
3. Following spinal injuries and tumors.

Postural Deviations:

1. General relaxed posture.
2. Scoliosis.
3. Round back.
4. Hollow back.
5. Foot and leg deviations.

Various Arthrodeses:

1. Foot.
2. Spine.
3. Hip joint.
4. All other types.

Tendon Transplants: all types.

Fascial Plastics: Abdominal, spinal, patella, etc.

Joint Plastics:

1. Shelf operations for congenital hips.
2. Closed and open reductions, congenital hips.
3. Arthroplasties.
4. Bone blocks.

Bone Plastics, Osteotomies: all kinds.

Fractures:

1. After open reduction.
2. After closed reduction.

Traumatic Sprains, Strains and Dislocations:

1. Backs.
2. Shoulders.
3. Hips.
4. Feet and legs.

Open wounds and Infections:

1. Osteomyelitis, post-surgical.
2. Septic arthritis.
3. Infected incisions.
4. Ulcerative skin lesions, decolietus, including haemophiliae type.

Epiphysitis:

1. Spinal.
2. Perthes disease.
3. Schlatter-Osgood

Congenital Defects and Deformities:

1. With bone deformities.
2. With muscular anomalies.

Cardiovascular Cases: Phlebitis, Thrombo-angitis etc.

Neurological Cases:

1. Progressive Muscle Atrophy, Poliomyelitis, Encephalitis, Myasthenia, etc.
2. Postural (in connection with neurological lesions).
3. Surgical (ante and post-operative treatment or neuro-surgical cases).
4. Traumatic injuries involving nerves.
5. Congenital (such as Little's Disease--Spina bifida).

Psychiatric Cases:

1. Hysteria.
2. Insomnia.
3. Neuroses.
4. Neurasthenia, etc.

Among those recognizing the value of pool treatment is Vernon L. Hart, who, in 1933, wrote: 'Septic joints, hand infections, osteomyelitis, paralyzes, fractures, and other conditions affecting locomotion, will often show remarkable improvement if treated under water at the proper time during the therapeutic program. The number of illustrations to show the practical applications of these various principles is unlimited, while the vast number of principles involved in surgical judgment and surgical technique will not even be considered.'

Unless swimming instructors and teachers of recreational activities in water have special training, they should make no attempt to handle pathological diseases, and of structures involved, might light up some quiescent disease process or increase potential or inherent deformity. Persons who deviate from the normal who wish to join in pool activities, as in schools, should do so under doctor's permission.⁶³

Consensus of Opinions on the Value of Swimming
as a Recreational and Educational Activity

Mr. Corsan in The Diving and Swimming Book says:

Between the usual feats of the late Captain Webb, and of Monty Holbein, who swam the English Channel, and of Mrs. Clement Corsan, the young Danish woman, between these and the average person

⁶³Charles Leroy Lowman, Technique of Underwater Gymnastics, p. 89-97.

whom we meet in the streets of our cities, there is far too great a gap; and it is my endeavor to fill this gap that I put forth this work, with the hope that swimming will be made compulsory in every public school in the world within the next ten years so that in another quarter century we will hear no more about absurd drowning accidents.⁶⁴

According to Dr. George J. Fisher,

Swimming is considered one of the best, if not the best, form of physical exercise. It stimulates all the muscles of the body and yet without nervous strain or tension. It is, like few exercises, equally good for men and women of all ages.

Swimming does not develop large musculature, but tones up the muscles and fashions them in graceful curves and lines. Swimming is a splendid stimulation to respiration and circulation as well as digestion. It makes for good posture. The fact that the body does not need to sustain its own weight provides for exercises of limited effort.⁶⁵

Swimming develops self-confidence, courage and assurance, and when carried to expertness enables the individual to rescue others from danger and from drowning. Moreover, swimming is rich in psychic content. How happy and joyous people are when frolicking in the water! How they shout and yell! The whole family, the whole class, the entire school or company may swim together. It is extremely social and joy provoking.

If one likes to swim, he sides with the majority. In the many polls taken to indicate sports interest, swimming usually either leads the list or is not far below the top.

⁶⁴George H. Corsan, The Diving and Swimming Book, Forward.

⁶⁵George H. Fisher, Introduction to Corsan's The Diving and Swimming Book.

Most persons like to swim because of the enjoyment inherent in the recreation but incidentally receive the other benefits, such as the factors of safety and physical development. Its value in the athletic program is apparent when one realizes that swimming is one of the few sports possible to all ages, both sexes, and to individual who are physically handicapped in ways which permit no other sport.

Should one belong to the unfortunates who do not swim or do not like to swim, he probably belongs to one of four classes:

1. He has never been in a situation where he had adequate facilities for learning.

2. He has learned to swim only slightly and does not feel secure in the water.

3. He has had some unfortunate accident in connection with swimming--either a drowning or near-drowning--and has never overcome the consequent fear.

4. He has some physical disability which makes swimming uncomfortable or painful.

With the proper amount of effort, patience and practice, under a capable instructor, these need not mar the chances for the enjoyment one should get from water activities.

Dr. Ainsworth, Director of Physical Education at Smith College, says:

Swimming has and continues to hold a most important place in the program of physical education. Doubtless one reason for this is that swimming is

not a matter of a formal class but a useful and delightful sport in everyday life as well as an important safety device. Not only in swimming itself, but rather in all water sports there is the satisfaction of individual effort combined with relaxation which makes this activity truly recreational and one which deservedly ranks high in popularity.⁶⁶

Jessie Peiring Williams says:

On the physiological side, swimming is an unrivaled form of exercise for most persons; it favors health and contributes greatly to safety.

But it seems to be most significant in relation to leisure time uses, and its adaptability for all ages and both sexes. The judgment is becoming more established that health, strength, and vitality can not be acquired in youth and stored as a sort of reserve against use in adult life. On the contrary, the view prevails, more and more, that these desirable qualities of life come from a mode of living, that they flow from life, and that, therefore, no specialized early training can make them sure or permanent. Thus, swimming as an avocation becomes at once the way of life for many persons, and only the limitation of facilities prevents a more general expansion of the activity.

I believe if the present increase in leisure time for all people keeps up without a corresponding increase in leisure time education, another generation will find intensified the problem of "What shall we do?" While there are many wholesome activities which may contribute to proper employment of leisure-time opportunities, it is probably true that motor activities will more nearly satisfy the majority of people. Swimming ranks high in the usefulness as an activity for leisure time. Skill and proficiency in swimming are intimately related to enjoyment of the activity, and hence, to the continued use.

Moreover, the more young people we can teach to swim, the more individuals will we add to society who have learned something for other than economic reasons. Education for enjoyment and education for fine living are not in need of defense. One has only to observe the mistaken zeal of those who think of life in terms of financial rewards, trusting that later on, when success comes, happiness may be bought.⁶⁷

⁶⁶ Dorothy Sears Ainsworth in Forward to Joss' Swimming Analyzed.

The tremendous growth of aquatic sports and the educational recognition given to this form of activity by the American Physical Education Association, American Red Cross First Aid and Life Saving Service, the Y. M. C. A., the Boy Scouts of America, and many kindred organizations interested in the education of the youth seem to substantiate its value as an educational activity worthy of any school.

Cordell B. Makarius has this to say concerning the educational value of swimming:

Schools are recognizing that swimming not only is an excellent health builder but it is a necessary part of every child's education. Many of the large cities now have school pools where children must take swimming as part of the school curriculum. This is an excellent step in the right direction, for swimming exercises every muscle in the body. It is a neutralizer. For the child who is underweight, the proper amount of swimming will build up weight; for the child who is overweight, swimming will help to reduce. This applies equally to adults. And one of the fine things about swimming is that in the summer time the child's body is exposed to the life-giving and energy-giving qualities of the sunlight.⁶⁸

Swimming is an exercise that should be learned as early in life as possible, for a child, as a rule, has not the fear of water than an adult has. Therefore, it is easier for him to learn.

Because swimming is the only exercise where the person does not have to support his own body weight and because it consists of stretching, pulling, kicking and pushing all in

⁶⁷Jessie Feiring Williams in *Forward to Lybia and Nita Sheffield's Swimming Simplified*.

⁶⁸Cordelia B. Makarius, "Teaching Youngsters to Swim," *Parents' Magazine*, VIII (August, 1933), p. 20.

a prone position, there is no better all-round exercise.

From an unsigned article, "Education in the Water," in the March 17 issue of Literary Digest we find this comment on swimming:

It would seem that swimming fits well into Utopian plans designed to make college athletes build more than biceps. In the East, Yale's Bob Kipphuth has demonstrated that fact that some swimming coaches might well be named "Professor." Tom Robinson is winding up a quarter century as a swimming coach who has taught far more than swimming to some 2,500 pupils a year for twenty-eight years.

As a coach, he has turned out swimming teams that have won six Big Ten water polo championships, ten Big Ten swimming championships, and five National Intercollegiate championships--all since 1914. But a record that he is more proud of was set by his pupils in 1922. In that year Northwestern undergraduates saved 458 people from drowning. And there are other significant records. For instance, his varsity swimmers have maintained a scholastic average of B-minus for twenty-four years.

Like Kipphuth, Robinson's most valuable work is building bodies that will age gracefully. He takes young bodies warped or weakened at birth or by accident and makes them feel at home in the water, enables them to build back to normal. As he puts it, 'Kids are my life.'69

In the opinion of Normal Engilson, swimming as a recreational activity has no equal. He states:

Swimming in its activity is far-reaching in its values. It is far-reaching also in that it is an activity which has been accepted, with few exceptions, by people of all classes and all ages. At pools maintained by boys' clubs, schools, semi-private and private agencies, and at thousands of beaches and lakes scattered throughout the country, swimming is exceedingly popular.

Last year, 5,313,199 people enjoyed the fun and values of swimming in 310 indoor pools in 122 cities;

CC "Education in the Water," Literary Digest, 117, 29, March 17, 1934.

while 17,651,165 people swam in 700 outdoor pools in 303 cities, all operated by recreation departments. Many new pools are in process of construction to meet the ever-increasing demand for facilities, and leaders are being trained and are more in demand every day to give the type of service necessary to help people utilize to the fullest extent the recreational possibilities of this sport.⁷⁰

⁷⁰Normal H. Engilson, "The Value of Swimming as a Recreational Activity," Recreation Magazine, XXVI (June, 1932), p. 145.

CHAPTER III

SWIMMING IN PUBLIC SCHOOLS

According to the 29th Biennial Report published by the Department of Education for the years 1935-36, there were 644 standardized schools in Texas. The total enumeration of children over six and under eighteen years September 1, 1936, was 1,558,855.

The value of school property of the entire state was \$235,236,456.

Questionnaires were used to obtain information concerning swimming participation and equipment in the public schools of Texas. One hundred questionnaires were mailed to the one hundred largest schools in the state. Of the hundred schools, forty-nine per cent returned the questionnaires, but there were only five of the forty-nine filled out. It was soon discovered that out of eighty-six cities that could well afford a pool in their school there were only eighteen pools in the entire state under the supervision of our public schools. In fact, there are only eighteen school pools in Texas.¹ However, the five that reported gave 27.3 per cent of the total number. There is a total of 7,957 children

¹Texas Public Health Department, Report of Pools Under Supervision. p. 2

enrolled in these five schools. These schools were junior and senior high schools. This total of 7,957 would give an average of 1,591 pupils per school.

The average size of these school pools was $41\frac{1}{2}$ feet in length and 22 feet in width. The average depth at the deep end was 8 feet 3 inches, and at the shallow end, 3 feet 2 inches. The average capacity of each pool was 3,000 (50 gallon) barrels.

The water supply for the pools in all five cases was from deep wells containing soft water.

Four of the pools were constructed of concrete and tile, and were financed by the school without charge to the swimmers. One pool charged five cents per swim but this was probably for towel rental.

All the pools are equipped with diving boards, three of which were covered with cocoa matting and two with rubber to prevent injuries from slipping. The boards averaged three feet in height.

All the pools are equipped with filtering systems, but the pools are drained and the walls and bottoms are scoured as needed. Four of the pool operators used some form of chlorine as a germicide for the pool water. They were found to be not quite so consistent in using germicides and deodorants in their shower and locker rooms as only two reported this as being practiced. All pool managers required bathers to take showers before entering the water. Hot and cold

water was provided. Caps were required as part of the swimming attire. Foot baths and physical examinations were required of all who swam in the pools. The general public was not allowed to use these school pools. One pool operator reports that the water was irritating to the eyes. This, however, was probably due to the chlorine content of the water as the pools all used chlorine, and the water source was the same.

In answer to the question, "Do pool conditions make disease-transfer probable?" all answered "No." All the operators reported that the regulations concerning the health conditions of the surroundings were rigidly enforced. These pools have been in operation on an average of fifteen and one half years each, and there have been only two minor and no serious accidents or drownings reported.

The original costs of the pools were unknown. They were not self-supporting, as there was no charge made for the use of the pools.

The sanitary condition of the pools was evidently good as there were no eye, sinus, or nose infections, and only two ear and one throat infection reported for the past year. To the question "How often is a bacteria count made?" there was no reply. There were no accurate data kept, but four of the five pools reporting estimated that there were 51,980 students who had used the pool in the last season.

The instructors seemed to be well qualified for their

positions, as four of the five were physical education majors and Red Cross Life Saving examiners. There were four life guards employed by the five schools. Only one of the pools was kept open after seven o'clock while one other was kept open the year round. There would be an opportunity for parents as well as students to spend some of their leisure hours at these pools, if arrangements could be made to keep them open in the evenings.

Eight men and eleven women were employed, which made a total of nineteen instructors for the five pools. There were twenty-five classes in swimming offered daily, most of which were beginners' classes, and averaged seven to the class. All schools had swimming clubs for girls, and one had a club for both girls and boys. Four schools had swimming teams, and at least eight meets were held, consisting of the usual swimming and diving events. Two of the schools offered one half unit toward graduation for those who took swimming. There was a limit of 42.5 minutes to each swim. Some phases of Red Cross Tests were offered in all the schools, and swimming was reported to be gaining popularity.

There are 36 cities and towns in Texas having a total of 529,298 scholastic population. If each child was charged seventeen and one half cents per swim, which is the average charge made by Texas pool operators, the annual proceeds would be \$90,980. At an average cost of \$20,000 per pool, 4.44 pools could be built in our schools each year. At this

rate it would be twenty years before our larger public schools would be equipped with pools. If these pools were accessible now and each child went in swimming once each season, we would have an annual participation of 136,326 pupils. If each child swam more than once, as he most assuredly would, and if his parents were allowed to go in with him, the results could easily be determined. I dare say that much of the child's allowance for confections and picture shows would be spent for swimming tickets, which would be more beneficial to the child's development. The last statements are purely supposition, but they have possibilities.

CHAPTER IV

SWIMMING IN TEXAS COLLEGES

Of the sixteen colleges in Texas that have swimming facilities eight, or 50 per cent, filled out and returned the questionnaires pertaining to swimming facilities sent to them. All these colleges were co-educational and with a total of 23,890 students.

The average length of the college pools was 72 feet and the width 41 feet 4 inches. The average depth at the deep end was 9 feet and the shallow end was 2 feet 9 inches. These dimensions were slightly larger than those of the high school pools. Six of the pools got their water supply from deep wells while one received its supply from a lake and one from a river. Five pools were constructed of concrete, and three of concrete and tile. Six were operated by the school without charge to the swimmer, while two charged for swimming. Season tickets at three dollars each were available for the summer months. The average charge for an individual swim was seventeen and one-half cents. The eight pools had ten diving platforms and twelve diving boards that were one and three meters in height, which is the standard height of boards used in all official diving contests.

Five schools practiced the safety measure of covering

their diving boards. The college pools held an average of 3,500 barrels of water and the water was changed on an average of once in eight days. Four pools had filtering systems, but they were drained and the walls and bottoms were scrubbed once each 57 days. Five pools had a continuous stream of water running in and out of the pool and all of them used chlorine in the water as a germicide. A germicide and a deodorant were used in all the shower and locker rooms, and all bathers were required to take showers before using the pools. Six of the pools were provided with both hot and cold showers, while the other two had cold water available. One half of the pool operators required the swimmers to use caps, while there were no requirements for the other one half. All pools were provided with foot baths and bathers were required to use them before entering the water. Only one college failed to require physical examinations of their bathers. In only one college was the general public allowed to use the pool, but they were required to have a physical examination. Two pool operators reported that the water in their pools was irritating to the eyes and nasal passages. The entire group said that disease transfer is not likely because of the pool's sanitary condition.

Regulations regarding accident prevention and health were rigidly enforced. This is evidenced by the fact that they have been in operation on an average of fifteen and one half years each without a single fatal accident or death by

drowning. There was only one pool operator that gave the original cost of construction of his pool and that was \$26,000. Two pools were self-supporting, but the proceeds for any one year were not known.

There had been no serious accidents and only eight minor ones reported in the past twelve months. Seven cases of sinus infection had been reported. This is to be expected unless the swimmers are taught to breathe properly while in the water. Bacteria counts were made on an average of once in three weeks.

There was a total of 27,370 people used the pools during the summer months or an average of 3,420 people per pool.

Seven of the instructors were physical education majors and the other one was a physical education minor. They were all experienced in Red Cross Life Saving and were all examiners in the service. Three had been in competitive swimming for at least eight years. Seventeen life guards, eight men instructors and eight women instructors were employed by the eight schools and thirty-five classes in swimming were offered daily. Beginners, intermediate and advanced classes were offered with an average of twenty-nine to the class. Six colleges had swimming clubs and three reported that they had held swimming meets, two of which had seven meets each.

All the colleges offered from one to two and one half hours credit toward graduation. All the college pool operators limited the time children were allowed to remain in the

water to an average of 40 minutes. All the schools offered some phase of Red Cross Life Saving work and five offered swimming tests for Boy Scouts.

All the colleges, except one, reported that the interest in swimming was increasing, and in this case it was suggested that the lack of increased interest was caused by the high altitude, which was 4,484 feet. Water polo was the only water game played to any extent.

CHAPTER V

SWIMMING UNDER NATIONAL AND PRIVATE ORGANIZATIONS

Recreation Departments

Of a total of 336 bathing places in Texas there are 232 pools. The other places are lakes, beaches, rivers, etc. Of the 232 pools in Texas 76 are under the direction and supervision of either city, state or municipal recreation departments. This leaves one hundred four swimming places that are not under very close supervision, such as our vast expanse of beaches and lake shores.

Houston has 22 pools or 7.8 per cent of all the pools in Texas. Four of the larger cities, Houston, Fort Worth, Wichita Falls and Dallas have a total of 55 pools, or 19.5 per cent of the total number of pools; 12 cities and towns have 95 pools, or 33.63 per cent of all the pools in Texas; 45 towns and cities have 170 pools, or 60.35 per cent of the total number of pools.

Young Men's Christian Associations

According to Wilson,

Worcester, Brooklyn, and Newberry were among the early owners of gymnasiums constructed in their buildings, but not until Buffalo and Montgomery in 1905 succeeded to Young Women's Christian Association buildings did any Young Women's Christian Association give swimming instructions in their pool.

TABLE 1
 DATA ON NUMBER OF POOLS IN EACH LOCALITY IN TEXAS AND PER CENT
 OF TOTAL NUMBER OF POOLS*

Number of Pools in Each Lo- cality	Towns	Percent of Total Pools	Accumulative Totals**		Percent
			Pools	Towns	
22	Houston	7.80	22	1	7.80
15	Ft. Worth	5.32	37	2	13.12
10	Wichita Falls	3.54	47	3	16.66
8	Dallas	2.84	55	4	19.50
6	2 towns (2.13%)	4.26	67	6	23.76
5	4 " (1.77%)	7.03	67	10	30.84
4	2 " (1.42%)	2.84	95	12	33.68
3	9 " (1.07%)	9.63	122	21	43.31
2	24 " (0.71%)	17.04	170	45	60.35
1	112 " (0.35%)	39.65	282	157	100.00

* Figures compiled from list of swimming facilities in Texas under jurisdiction of State Health Department, 1932.

** The accumulative totals are carried forward from one column to the next so that the summary may be easily comprehended. For example: Houston has 22 pools or 7.80 per cent of all pools in Texas, four of the larger cities, Houston, Ft. Worth, Wichita Falls, and Dallas have a total of 55 pools, or 19.50 per cent of the total number of pools; twelve cities and towns have 95 pools, or 33.68 per cent of all the pools in Texas; forty-five towns and cities have 170 pools, or 60.35 per cent of the total number of pools.

Later on, a pool, or merely a plunge, began to be thought a requisite for any organization of this character.¹

In The Hand Book, written by the Young Women's Christian Association, we find this interesting statement:

It is not so long ago that it was said with authority that girls in their early teens took to croquet, while boys of the same age took to swimming and games of contest. Today, the swimming pool is as necessary as a gymnasium. 'Swim to health,' says an author; 'there is nothing to compare with an hour's swim as a refresher.' On fine nights, girl swimmers in the city association pool astonish spectators with their skill.

A course in life saving ends with an exhibition of prowess. The swimmer takes prescribed tests in distance swimming, diving for weights, releasing and towing other swimmers, and resuscitating the apparently drowned. Swimming is just beginning to claim its place among sports, and young people are learning how much it adds to fun and health. The association has adopted as a motto for its swimming classes, 'Winter to learn, spring to practice, and summer to enjoy.'²

Emmett A. Rice says:

The Civil War called attention to the deficient man power of the nation and many observers came to the conclusion that the young men were of a very low physical standard. These beliefs gave impetus to the rise of sports and gave arguments for physical education in the schools and colleges. Leagues of amateur and professional athletes, athletic clubs, Young Men's Christian Associations and similar organizations contributed to the wave of enthusiasm and promoted athletic games and contests.

In 1835, the International Training School of The Y. M. C. A. was founded at Springfield, Massachusetts for the purpose of furnishing the association with trained leadership. Two years later a department of physical education was added. At that time

¹Elizabeth Wilson, Fifty Years of Association Work Among Young Women, p. 10.

²Young Women's Christian Association, The Hand Book, p. 36.

there were about 170 Y. M. C. A. gymnasias and about 50 paid directors.

Dr. Luther H. Gulick, director of the training school at this time, said that 'the aim of the department is to provide physical education, health, and recreation.' He says further, 'Physical examinations and measurement should precede exercise. If serious defects are found, corrective work should be prescribed. Exercises should be followed with a shower bath. The gymnasium should not be in the basement. It should be equipped with an artificial ventilating system, with showers and plunge bath. It is the duty of the physical director to teach personal hygiene, sex hygiene, community hygiene, first aid, and swimming. Outside organizations are encouraged to use the building facilities, the basketball floor, the bowling alleys, and the swimming pool.'³

The Physical Education Department of the Young Men's Christian Association has had a steady growth the last forty years. The Year Book for 1925 recorded a total of 1,688 associations with a membership of 968,929, of whom 454,936 were active. There were 308 gymnasias, 246 athletic fields and 547 swimming pools. The number enrolled in regular gymnasium classes were 202,743 men and 206,314 boys, a total of 409,557. There were enrolled in swimming and life saving classes 162,703. A total of 320 physical directors were employed. No other organization in the United States, outside the school system, equals this extensive work in physical education.⁴

Of the twenty-one Y. M. C. A.'s in Texas there are eighteen that have swimming pools in their buildings. These organizations are more or less self supporting, and it is evident from the ratio of pools to the number of associations that swimming pools are a good financial investment as well as a social and recreational one.

The survey that was made showed that the pools in the

³Emmett A. Rice, A Brief History of Physical Education, pp. 194-197

⁴Ibid., p. 184.

Y. M. C. A.'s as they were operated at present, were not self supporting. This question could not be answered definitely as the membership tickets included the uses of the other facilities. One Army Y. M. C. A. reported that their pool receipts were \$10,000 for the past year.

There was a total of 31 minor accidents, but no major or fatal accidents were reported. No cases of eye, ear, nose or throat infection were reported, but there were 10 cases of sinus infection. All these Y. M. C. A. pools kept close check on the sanitary conditions of their pools by having a bacteria count made on an average of once every $11\frac{1}{2}$ days.

Five pools that were kept open the year round reported that 154,050 people used the pools.

All the directors or instructors reported having had either special courses in Y. M. C. A. life saving or the American Red Cross Life Saving courses. This should qualify these instructors for their positions and provide protection to those using the pools. There were 13 of these instructors employed.

In addition to the instructors, 7 life guards were employed. All the pools are kept open after 7 p. m. In winter, the water is heated in all these pools except one. Thirty swimming classes were taught daily with an average of 12 people to each class.

Either Red Cross or "Y" Life Saving Courses were offered at all the pools and there was an average of 12 to each class.

Swimming teams were organized at all the associations and 17 meets were held last year. These meets included all the standard events in swimming and diving. The Y. M. C. A. pool operators offered a number of water games and sports and the interest in swimming increased.

The American National Red Cross

According to the American National Red Cross,

Recreation in and on the water has ever been and always will be appealing and attractive to a multitude of people. Indulgence in any of its forms is recognized almost universally as being a happy, health-benefitting experience, but it goes even deeper. In swimming, canoeing, rowing, sailing, motorboating, there may be found at one and the same time release for mind and body--release that makes a change from routine habits of living, thinking and acting to the not usual, nor habitual, stimulation of thought and activity which 'recreates' the individual. Environment, activity, and mental and physical stimulation, all contribute to the environment which is so manifestly evident wherever and whenever people indulge in aquatic sports.

Water sports are also among the most social of recreational activities. Few, indeed, are there among other sports in which so many can engage simultaneously and in the same place regardless of age, ability or relationship. The bather is usually happiest when he is accompanied or surrounded by other bathers. The skilled fancy diver is most active when pitting his skill against other divers. Small craft, except certain restricted types, are designed for two or more persons. Bathing beaches and pools may range all the way from the little "swimming hole" which can accommodate its half dozen or so small boys, to the great stretch of surf bathing beach upon which tens of thousands disport themselves. Whether it is in family groups or crowds, the keenest enjoyment of water sports is to be found most generally in the company of others.

The one dark note in an otherwise bright and stimulating picture is seen in the number of people who lose their lives by drowning (7,500 a year on an average during the past several years) and in the

many thousands who experience a "near-drowning but manage to survive. It is not surprising, however, that these facts have had no effect in diminishing the number of those who seek recreation in and on the water. Everyone, except perhaps the uninstructed small child, knows that there is this fundamental element of danger in the water, yet they are willing to take such risk as they may encounter. A great majority of people will never get into difficulty in the water, since, fortunately, the habit of caution will govern their actions, but there still will be many who, through lack of knowledge or lack of skill, will face the danger of drowning.

Knowledge and skill--these are the things which tend to eliminate danger. Skill in aquatics is acquired through instruction and practice. Knowledge is gained by means of instruction and experience. There is no end to the acquirement of either, and a person is reasonably safe in the water in exact proportion to the amount of each he possesses.

Swimming skill must, of course, always be the primary factor in water safety, whether one is in or on the water; but skill in handling small craft, skill in meeting uncommon situations and skill in assisting and rescuing others are of equal importance.

For nearly a quarter of a century and beginning with the pioneer efforts of Wilbert E. Longfellow, continuously a leader in this field, the Life Saving Service of the American Red Cross has been engaged in gathering information on all phases of water safety and in seeking out, developing and testing rescue methods for life saving.⁵

Man did not and does not naturally belong in the water. He lives, walks, eats and sleeps on land. His whole physical make-up--posture, body temperature, breathing apparatus, shape and arrangement of arms and legs, specific gravity, functions, everything--has been developed and is arranged for for terrestrial living. There is literally nothing to indicate that there is anything natural about his aquatic activities; yet an unbounded curiosity, a dominant will and a

⁵Harold F. Enlow, Life Saving and Water Safety, Preface.

marvelously adaptable brain and physical structure have not only urged him into the water but have prompted him to develop a form of locomotion suited to his needs in the new environment.

He has found comfort, relaxation and enjoyment in the experience, but at the same time experience has taught him that in the water there are definite limits beyond which he cannot safely go, and that there is a certain amount of knowledge of water conditions which he must acquire.

Everyone knows certain basic facts about the water and about bathing. Water can suffocate (drown) a person if it closes over the mouth and nostrils for a more or less indefinite period of time; a few seconds in some cases, minutes in others. Dr. Charles A. Lauffer has this to say:

A man can fast forty days or more if water is plentifully supplied him, but if his diaphragm is paralyzed for three minutes, thus depriving him of air, he may perish. A man requires oxygen, of which the air contains 20 per cent, and he must eliminate carbon dioxide gas, the reaction of which itself will paralyze (inhibit) his diaphragm. From whatever cause his diaphragm is paralyzed, it is self-evident that if the man's life is to be saved, artificial respiration must be employed until his disturbed nerve centers recover their normal facilities; that is, until he is able to breathe.⁶

It is common knowledge that to move about and to keep from drowning in deep water, one has to learn how to swim. no one, as far as the records show, ever walked directly into the water and swam away without previous knowledge of, or

⁶Charles A. Lauffer, Red Cross Life Saving Methods, Bulletin 1005, Part III, p. 17.

practice in some form of swimming stroke. It is quite true that a number of persons who could not swim have fallen or have been pitched into deep water and yet were able by strenuous effort to keep their heads above water, and in some cases actually made a little progress; nevertheless, the fact remains that they have not been at ease nor could they continue their efforts for very long.

These facts are fundamental and well known and need only to be repeated to children as they come to the age of understanding to insure a certain amount of water safety to the race. But this is not enough. The record down through the ages of the millions who have drowned, despite their basic knowledge, bears witness to the fact that there are other factors in aquatic experience that have to be considered. Although much has been accomplished in safeguarding the lives of those who bathe and a system of rescue has been worked out to aid those who get into difficulty, it is a fact that real safety in the water is largely a personal matter; that is every person from the time he first enters the water until his taste for bathing ceases, should steadily acquire the knowledge and the skill which will enable him to take care of himself under all except the most unusual conditions.

Every person who seeks recreation in the water needs to know certain things about being safe in the water from the time he takes his first plunge. As his aquatic skill increases, so should he parallel his development as a swimmer

with certain definite safety skills which are wholly personal in nature. Such skills would enable him to meet emergencies whether he ever has to face them or not.

The knowledge necessary for safety in bathing consists largely in knowing when, where, and how much to bathe. Skill for safety is made up of abilities to meet commonly hazardous conditions which beset the bather from time to time. This is the sum and substance of personal safety in the water.

The question of where to bathe is a natural one. Literally thousands of safe bathing places in this country are not available for use. Texas is fortunate indeed in having a vast expanse of territory in its many miles of sea coast and rivers and lake shores.

Common sense should guide the bather in the selection of the place and the conditions under which he should enter the water. It should tell him that he is safest when under the observation of a life guard, a teacher or a companion who is a swimmer, and in bathing areas where conditions of water, depths and bottom are known to be suitable for bathing. The nonswimmer should resist at all times the temptation to venture with artificial support beyond his depth. The most common of these supports are planks, water wings, inner tubes or the shoulders of a well-meaning but foolish swimming companion. If the unexpected happens and he loses that support, he does not have the ability to regain the shore. The novice should not over-estimate his ability or

try something he is not capable of doing. The good swimmer must remember that he is an ever present example to the non-swimmer and novice alike who seek to immitate his skill.

How much to bathe is another factor to be considered. It is difficult to set arbitrary limits upon the length of time one should remain in the water. The usual controlled bathing period is generally set at one-half hour but even this is frequently shortened if conditions warrant. It would be unwise, however, to say that this should apply to all bathers, since it is well known that there are many persons who can stand emersion for much longer periods. The length of time a person may stay in the water without ill-effects is governed by the sense of physical comfort. A survey of any bathing beach or pool will show as many out of the water as in it, which indicates that people regulate of their own accord the amount of time they actually spend in the water. Children at times allow their sense of enjoyment to outweigh a growing feeling of discomfort, and usually prolong their periods of immersion. If they are under control as, for example, at our school pools, there is plenty of evidence actually visible to the supervisor to indicate that they have had enough. Uncontrolable shivering, a bluish tinge to the lips, a drawn or pinched face, cold and clammy skin, all tell the experienced teacher or life guard that it is time to come out. These warning signs are easily recognizable, too, to the individual himself and should be heeded. Panic, that

sudden uncontrollable and overwhelming fear which attacks people in the face of real or fancied danger, is a contributing cause to practically all water accidents. In swimming, it is, of course, motivated by the thought of drowning and attacks most commonly the non-swimmer and the novice, though the skilled swimmer whose swimming ability has been developed in the quiet waters of a tank, may become panicky in open water when he observes as he swims toward shore that the waves are apparently running against him. This condition frequently occurs when the wind is offshore.

Exhaustion is another common contributory cause to water accidents. This condition may be brought about by entering the water when overtired from some physical activity indulged in prior to the swim, overexertion in swimming or reaction to cold water. In the first case, a period of rest and recovery before entering the water is the normal requirement to insure reasonable safety. In the second case the swimmer, provided he is healthy will exert himself to the utmost. He should know when to rest and should remember, when swimming out in a body of water, when to turn and come back to shore. Often, experienced swimmers strike out and swim until they begin to feel tired, forgetting that they have to swim the same distance to shore. This sometimes occurs when the tide is going out or there is an undertow in the water.

In supervised and well-regulated bathing places, custom

and knowledge of local conditions usually bring about the establishment of a set of regulations to govern the conduct of bathers. These rules follow quite normally a course beginning with the control of health factors by means of the required soap bath, and the restriction of bathers who are unwell or suffering from infection. Frequently a physical examination by a physician is a preliminary requirement to bathing. Slippery walks, towers, and diving boards are often the cause of accidents and should be made safe by covering the slick places with matting of some kind or roughing the slick surfaces. All such rules are devised for the safety of the individual and the group by eliminating dangerous practices and bathers should conform to such regulations for the good of all.

Cramp has been called the bane of swimming, since it causes pain and discomfort and engenders panic and fright in the swimmer's mind, which many times results in a drowning. Cramp occurs in muscles, making in the belly of the muscle a tight hard knot which for the time being incapacitates or greatly inhibits action in the part of the body in which it occurs. It is accompanied by pain in greater or less degree, depending upon its location. Cold or tired muscles are most susceptible to cramp, and as the muscles of a swimmer frequently may be in this condition, cramp is a common occurrence while bathing. The parts most often affected by cramp when swimming are the foot, the calf of the leg and the hand.

Cramp may also occur in the back or the thigh and rarely in the upper arm. In all such cases, the treatment is the same. The swimmer rolls to a face downward position in the water, with lungs fully inflated and grasps the cramped area firmly with one or both hands. Continued pressure will release the cramp, but unless massage is given the cramp is likely to return. When cramp attacks the stomach or abdomen, the situation is much more serious because, if the swimmer does not receive aid, he will, in all likelihood, drown.

The part of the American National Red Cross in the campaign of safety in water is an important one. They are responsible for most of the safety measures practiced in our swimming activities and recreations. They have arranged a program whereby the young children of our state and nation can be taught to swim and to protect themselves and their companions. This program includes beginners, swimmers, juniors, seniors, and examiners. After one has become schooled in safety methods he may, if he chooses, work for the organization.

Some of the safety measures included in the courses offered by the American National Red Cross are:

1. How to approach and rescue a person in distress.
2. How to disrobe when accidentally thrown into the water while riding in a boat, etc.
3. How to break strangle holds when grasped by a drowning person.
4. How to carry a drowning person to safety.
5. How to float motionless on the surface of the water.
6. How to support a tired swimmer in the water.
7. How to direct and protect summer camp swimming

areas.

8. How to safely handle small craft in the water.⁷

Last and most important, they teach people how to give artificial respiration to the person who is unconscious and has stopped breathing.

These methods of safety for swimmers are just one of the phases of Red Cross Work. They teach safety and first aid to a host of organizations and some of the organizations that have adopted the Red Cross method are as follows: The American Telegraph and Telephone Company; American Gas Association; National Safety Council; Bureau of Medicine and Surgery, Navy Department; Office of the Surgeon General, War Department; United States Bureau of Mines; United States Bureau of Standards; and the United States Public Health Service.⁸

Twelve of the Texas high schools and colleges offer some form of Red Cross Life Saving work in their program. Twenty-one Red Cross Life Guards are employed by the schools and colleges and these guards teach swimming and safety measures, more or less, while they are in the services of the schools. There was a total of 117 Red Cross classes being taught in Texas schools last year.

In well supervised places there is very little cause for worry. Our chief concern as teachers should be the

⁷The American National Red Cross, Red Cross Life Saving Methods, Bulletin 1005, p. 6-27.

⁸Ibid., p. 13.

safety of the swimmer at beaches, lakes, rivers and the proverbial "old swimmin' hole" where there is no supervision.

The following broadcast, prepared under the direction of the Surgeon General, United States Public Health Service, and a subscriber to the American National Red Cross Methods, entitles "Safe and Sensible Swimming," was given over a national coast-to-coast hook-up in May, 1938:

Swimming, because of its natural combination of moderate exercise and healthful recreation, is justly one of the most popular of sports. No longer is swimming a summer privilege, to be enjoyed only by those who can sojourn by suitable water courses. Now, with the presence of numerous artificial pools, one may indulge in this favorite exercise throughout the entire year, usually in comfort and comparative safety. There are, however, a number of health hazards associated with swimming which should be known and avoided.

Few persons attempt to acquaint themselves with the sanitary environment or quality of the water in which they swim. There is a blind trust in the supervisory authority of an official supposedly on constant watch. Frequently, however, such sanitary supervision is either not exercised or the supervision is so nominal or unskilled as to afford no adequate protection. Consequently, it is a wise precaution to make some personal inquiries and inspections prior to entering a stream or pool.

Swimming places in streams should not, of course, be exposed to the discharge of raw sewage. The presence of garbage, refuse or waste is evidence of contamination sufficiently grave to warrant the exclusion of bathers. The too common practice of swimming in places in which the condition of the water is dubious is certainly fraught with danger to health. Moreover, the illnesses which are liable to ensue cast an unjustified aspersion upon a most healthful exercise. In order to be reasonably certain as to the sanitary quality of water in swimming places, the advice of the local or State health department should be sought and followed.

The sanitary responsibilities in connection with swimming are chiefly two, particularly in pools. First of all the manager of a pool has a definite

duty to his patrons and second the swimmer has a definite responsibility to the other persons using the pool. Every operator of a bathing place of limited proportions should provide facilities for cleaning the body prior to entrance into the pool. Soap, and warm water delivered from a shower should be used under supervision. The towels and bathing suits should be clean and preferably sterilized. Whenever practicable it is better to use one's own towels and suits from home.

The water in artificial pools should be kept in as pure a state as possible by filtration, sterilization or a combination of the two processes. As these are procedures requiring technical knowledge the swimmer had best rely upon the official statements of the health officials as to the safety of the water in a given pool. Any bather, however, can determine for himself whether the water is clear and whether the sides and bottom of the pool are free from slime and other foreign matter. In justice to himself and others who patronize swimming places one should be prompt in reporting departures from what is known to constitute good procedure.

Despite all precautions bathers are constantly introducing pollution and occasionally infection into water. Consequently, every person contemplating a swim should refrain from entering the water when he is not well. A common cold, a skin eruption, inflammation of the eye, ear, nose or throat, or fever should be sufficient to deter any reasonable person from entering a swimming place. In some places a physician or a person with practical experience scrutinizes bathers prior to entry into the water. Signs of illness, skin diseases or other manifest deviations from the normal are considered sufficient to cause the exclusion of the person so discovered.

When swimmers come to a realization that disease prevention is a matter of mutual concern just that soon will pink eye, sinus infection and other disagreeable and painful infections be greatly reduced in number. The practice of many of spitting into the water is reprehensible. In many pools a scum gutter is provided and this should be used. Care should also be taken not to pass water in and out of the mouth or swallow the fluid, lest intestinal infection occur. It is well for both men and women to wear rubber caps which will prevent the entrance of water into the ears. This simple precaution may prevent inflammation of the middle ear.

There are a number of simple rules, which when observed, add to ones comfort while in the water,

and at the same time prevent disagreeable effects and after affects. In the first place, it is best not to enter the water when overheated. Failure to observe this rule may cause cramps. Then, too, it is unwise to swim immediately after eating. Instead, an interval of at least two hours should elapse. After entering the water, it is injudicious to swim until one is over tired. When this is done, the splendid tonic effects of swimming are lost and an undesirable reaction, both disagreeable and harmful, is substituted.

There is certainly little to be gained from a health viewpoint by lolling in the water for several hours at a time. To obtain the beneficial effects of a swim one should not remain in the water longer than 30 minutes at most, this period being coupled with appropriate short rest periods unless the swimmer is unduly hardy and accustomed to the vigorous exertions involved. The practice of "drying off" often in a chilly atmosphere is one to be condemned because of the possible chilling of the body. It is much better to enter the water several times daily, taking a brisk rub after each swim and changing into dry clothes, instead of allowing the clothing to dry on the body as some do at the seashore.

Everyone who swims should know how to protect himself while in the water and also be familiar with life saving methods. In many universities and schools a student is not considered proficient until he has demonstrated his ability to swim in ordinary clothing and perform simple life saving tests. Swimming should promote good personal judgment as well as cultivate habits and deeds of courage in emergencies. Foolhardiness in the water frequently leads to disaster. Diving in shallow water, unnecessarily long swims beyond reach of assistance and swimming beneath fixed objects are acts of poor judgment.

The prone method of resuscitation, including artificial respiration, known as the Shafer method, should be known by every swimmer. Immediate application of the principles embodied in the Shafer method will sometimes save life even when practiced by the inexperienced. Descriptions of these methods are available from various sources. Among which may be mentioned the American Red Cross, which issues bulletins and gives practical demonstrations of life saving methods.

Swimming is a sport to be encouraged because of its value as exercise and diversion. The casual swimmer soon discovers unused muscles and finds himself breathing more deeply than has been his custom. It is an exercise not limited by age, being available

for the elderly as well as the young, provided they have no organic impairment and react well to the hardy exercise involved. To the mentally and physically tired swimming acts as a disseminator of fatigue products, planting in their stead a sense of well being and exhilaration. It is distinctly a sport worth cultivating, provided the necessary safeguards are provided in an intelligent and sensible manner. Mere bathers should double the pleasure they derive from the water by learning how to swim.⁹

⁹United States Public Health Service, Broadcast.

CHAPTER VI

SWIMMING IN PRIVATE, PUBLIC, AND MUNICIPAL POOLS

Climate

Table 2 shows the actual number of days with temperature less than 32 degrees Fahrenheit. During the month of January, it can be seen that thirteen days show a temperature of less than 32 degrees Fahrenheit. During February, the average is eight days, for March, five days, for November, five days, and December, eleven days. On an average, forty-three days of the year show a minimum temperature of less than 32 degrees Fahrenheit.¹

Swimming on these days would be impossible outdoors.

Table 3 shows that the months of June, July and August are the hottest months of the year. The average mean maximum temperature for June is 91 degrees Fahrenheit; for July 95 degrees Fahrenheit; and August 95 degrees Fahrenheit. Although the data reveal the fact that it is quite warm during the summer months, it cannot be concluded that outdoor swimming is impossible at any time due to the heat. The absolute maximum temperature data show that temperatures of well over 100 degrees Fahrenheit are recorded during the months of June, July, August, and September.²

Another factor that must be considered in determining whether weather conditions are suitable for outdoor swimming is the question of northerners. During the months of January, February, March, April, October, November, and December nor-

¹William E. Smith, The Determination of the Adequacy of Facilities for Carrying on a Given Physical Education Program, Thesis, pp. 48-53.

²Ibid.

TABLE 2

NUMBER OF DAYS WITH TEMPERATURE OF 32 DEGREES OR LESS

Year	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1931	10	2	3	1	0	0	0	0	0	0	0	3	24
1932	11	2	12	0	0	0	0	0	0	0	16	17	53
1933	6	11	2	0	0	0	0	0	0	0	4	7	30
1934	10	3	4	0	0	0	0	0	0	0	1	13	36
1935	14	6	1	0	0	0	0	0	0	0	3	16	40
1936	25	20	2	3	0	0	0	0	0	0	7	10	67

TABLE 3

MONTHLY MAXIMUM TEMPERATURE BY YEARS, THE MEAN OF THE MAXIMUM TEMPERATURE BY YEARS AND BY MONTHS, AND THE MEAN OF THE MAXIMUM TEMPERATURE OVER A PERIOD OF SIX YEARS FROM 1931 TO 1936, INCLUSIVE

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Mean
1931	57.7	61.5	61.7	70.9	78.5	85.7	96.7	94.4	93.7	88.9	89.6	88.6	76.9
1932	50.8	60.7	66.3	73.7	81.9	90.3	94.5	96.4	88.6	80.0	65.9	51.9	76.4
1933	52.9	59.0	71.2	79.4	84.6	93.7	97.3	92.3	91.9	82.6	70.3	66.5	79.4
1934	59.4	60.3	66.1	76.3	84.8	97.6	102.0	101.0	90.1	86.6	71.7	61.3	79.9
1935	60.0	62.3	74.8	75.7	77.0	97.1	95.0	97.4	82.5	77.3	60.2	52.8	75.3
1936	54.1	54.0	74.9	77.3	83.7	95.3	97.2	102.0	90.3	73.7	63.7	58.4	77.3
Mean	55.7	60.7	63.5	76.1	81.7	91.7	95.9	95.5	95.5	79.1	66.5	56.5	76.5

thers occur in Texas. These winds from the north are usually sufficient to make swimming outdoors uncomfortable, if not impossible. Table 4 shows the number of northers that occur per month and per year.

Table 5 shows the number of clear days per month and per year. The data show that an average of 192 days per year are clear. It should be noted that January, February, and March have the fewest clear days. There probably would not be any swimming out of doors in Texas unless it were on the coast at Galveston or Corpus Christi. The months of June, July, and August have the most clear days and the weather is very warm.

In table 4 the months of June, July, and August show that there were no northers. May and September together show only a total of 3.6 for the two months. The effect of northers in these two months would hardly be felt on the coast of Texas or in the Rio Grande Valley. Swimming can be done during the last half of April, all of the months of May, June, July, August, September, and the first half of October with comfort throughout Texas. In the southern part of the state the more hardy swimmers can go in the water much earlier in the spring and later in the fall. It is possible for swimming to be carried on for seven months of the year in the open on the coast of Texas.

Precipitation is another important factor in determining the number of days swimming may be carried on outdoors. People do not care to be in the water during a rain, especially

TABLE 4
NUMBER OF DAYS OF NORTHERS PER MONTH AND YEAR

Year	Month												Annual
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1931	6	4	6	5	1	0	0	0	2	4	2	5	30
1932	7	2	6	2	0	0	0	0	1	6	6	6	36
1933	4	7	6	4	3	0	0	0	1	3	5	5	35
1934	8	3	9	4	3	0	0	0	4	4	5	7	46
1935	3	4	5	5	1	0	0	0	1	2	5	5	31
1936	7	4	3	3	0	0	0	0	1	4	3	2	25
Mean	7.9	6.2	5.8	3.9	1.5	0	0	0	2.1	4.4	5.8	7.1	44.6

TABLE 5
NUMBER OF CLEAR DAYS PER MONTH AND PER YEAR

Year	Month												Annual
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1931	13	10	16	12	14	15	16	14	21	21	10	9	171
1932	16	10	17	16	16	14	20	17	12	20	24	16	198
1933	16	13	12	16	16	23	20	12	19	24	20	20	216
1934	16	15	23	12	21	30	25	25	19	20	16	17	247
1935	14	12	9	13	11	14	25	23	13	14	12	14	172
1936	18	17	19	20	13	24	20	24	10	18	15	19	217
Mean	14.7	12.7	14.0	13.8	14.7	18.8	20.1	18.9	17.3	17.5	15.9	14.5	192.9

TABLE 6
MONTHLY AND ANNUAL PRECIPITATION IN INCHES

Year	Month												Annual
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1931	1.35	3.77	3.87	1.77	2.19	1.37	2.01	2.47	.33	4.16	2.11	2.17	27.52
1932	7.12	4.15	.61	1.96	4.57	4.32	2.76	.77	2.08	1.33	.04	5.60	36.81
1933	3.33	1.68	3.41	2.24	5.22	.05	4.11	3.70	1.91	1.22	.56	1.54	29.24
1934	1.25	1.35	3.75	4.19	4.24	.23	.05	.19	3.37	.14	2.69	.41	22.36
1935	4.45	2.55	2.20	3.54	11.50	5.27	3.03	.21	7.36	3.11	3.09	2.86	49.24
1936	.85	.11	1.82	.60	7.77	.02	1.60	.12	9.75	3.72	.89	1.60	28.95
Mean	2.36	1.81	2.04	3.68	4.76	2.73	2.13	2.66	4.13	3.42	2.06	2.48	32.86

TABLE 7
TOTAL AMOUNT OF SNOWFALL BY YEARS*

Year	Snowfall in Inches
1931	.01
1932	3.01
1933	.75
1934	.75
1935	.25
1936	3.00
Average	1.29

*This table applies to Denton County only.

if there is lightning and thunder. Table 6 shows the monthly and annual precipitation in inches. It can be shown that the average annual precipitation is 32.36 inches. This precipitation is rather evenly distributed over the entire year but the data indicate that the heaviest occurs in May.

Table 7 shows the total amount of snowfall per year. The average snowfall is only 1.29² inches per year.

It is obvious that there would be no swimming out of doors while snow is falling or while it is on the ground, but table nine indicates that the snow fall in Texas is very meager and could not be considered a handicap in itself to outdoor swimming in Texas. The swimming in the indoor pools would not be affected by snow fall to any appreciable amount. It is hoped that the above information may be of some help to those concerned in contemplating the building of outdoor pools.

The data for the weather conditions in Texas were taken from the Texas Agricultural Experiment Farm, Sub-station 6, located in Denton County, Texas, and were compiled by William E. Smith in his preparation of the thesis entitled, "The Determination of the Adequacy of Facilities for Carrying on a Given Physical Education Program."

Variety is an outstanding characteristic in all Texas resources, including weather. The contrast between weather conditions in the Sabine basin and those on the Diablo Plateau, with respect to rainfall and

²This table applies to Denton County only.

humidity is about as great as will be found in the United States. Several Sabine and Neches Valley points show an average of more than fifty inches of rainfall annually. The El Paso average is less than ten inches. Between the two regions can be found all the gradations from humid to arid climate. From north to south the variation is not as great but the semi-tropical Rio Grande Valley contrasts strongly with the Panhandle plains, stretching through ten degrees of latitude, varying in altitude from seacoast to 4,000 feet elevation, in the Panhandle and the Trans-Pecos Plateau (exclusive of mountains that rise to more than 8,500 feet elevation). Texas has cause for diversity of climate. Texas has about 300 miles of coast line and an area of low coastal plains as large as an ordinary state.

The "northers" for which Texas has acquired a reputation are cold bursts of wind that sweep down toward the seacoast during the winter months. The characteristic norther is accompanied by a few hours of cloudy weather with rain, possibly, or sleet or snow in the northern part of the state, after which skies clear rapidly. The months of December, January, February are relatively clear in the normal year. While the temperature drops to zero in the northern half of the state, this is seldom, and there is no weather station in the state where the January temperature drops to a normal lower than 34 degrees. The January normal temperature in the north central part of the state is about 45 degrees. In the lower coastal region it is about 55 degrees.

Snowfall reaches a maximum of about twenty-five inches in the Panhandle. On the lower plains of North Texas, the average is about five to ten inches. In the lower central portion of Texas there is usually no snow and it is almost unknown on the coast and in the Rio Grande Valley. The first and last frost dates for principal weather stations are given in a statistical table which is to follow.

The midsummer months are warm throughout Texas. However, both the region along the coast and the high plains country find relief in either sea breezes or the cooling effects of high altitude, especially at night.³

Facilities in Texas

Texas had the greatest area of square miles while Rhode

³ "General Characteristics of Texas Weather," Texas Almanac, 1937, p. 179.

TABLE 8

STATISTICAL DATA OF TEXAS TEMPERATURE, FROST, WIND VELOCITY,
AND EXTREME RAINFALL

Station	Length of record (Yrs)	Annual mean temperature	Temperature		Frost		Wind Velocity		Rainfall	
			Highest	Lowest	Ave. Date First Killing Frost	Ave. Date Last Killing Frost	High-est Wind per Hour	Date	Great-est Rain-fall in 24 Hours (In.)	Date
			Record Date	Record Date						
Abilene	45	64.2	110 6-30-07	- 6 2-13-99	10-11	3-23	51 5-3-92		6.78	5-22-08
Amarillo	39	56.5	106 6-17-24	-16 2-12-99	10-31	4-17	65 4-5-95		4.16	8-12-28
Corpus Christi	44	70.7	102 8-11-28	-11 2-13-99	12-17	1-24	69 8-13-10		8.20	6-20-24
Dallas	17	65.5	105 5-14-25	- 3 1-18-30	11-14	3-18	63 5- 1-29		6.08	4- 3-22
Del Rio	25	69.2	111 7- 9-10	-12 1-11-18	11-27	2-23	54 4-11-27		6.36	10-3-30
El Paso	51	63.6	106 6-23-24	- 5 12----80	11-14	3-19	57 3-20-32		6.50	7- 9-81
Ft. Worth	33	65.4	112 8-18-09	- 8 3-12-90	11-17	3-11	51 5-21-05		8.81	4-24-22
Galveston	60	69.0	100 3-27-24	- 3 2-12-99	12-25	1-19	71 8-17-15		14.55	7-13-00
San Antonio	45	69.0	107 2-12-99	- 4 2-12-99	11-30	2-23	56 5- 9-32		7.08	10-1-13
Taylor	29	67.0	109 1-13-30	0 1-13-30	11-26	3--6	44 4- 3 -13		23.11	9- 9-21
Houston	35	65.1	108 1-18-30	- 5 1-13-30	12--5	2-14	63 3-30-26		7.08	12-1-13

Island had the smallest. It was interesting to note that the smallest state surpassed the largest in the number of facilities this being 483 for Rhode Island and 282 for Texas. According to size, Rhode Island was far ahead of the other states in the number of facilities. The comparison of the population of the states was also interesting. Texas had a total population of 4,661,027 while Rhode Island had only 604,397. This would give an average of 16,504 persons to each pool in Texas and 1,035 to each pool in Rhode Island. Pennsylvania ranked first in population with a total of 8,720,159. She had 668 swimming facilities, and an average of 10,042 people to each pool. Nevada had the largest area per pool. This was 6,864 square miles but the total persons per pool was only 4,833 or much less than that of Pennsylvania. Rhode Island had a pool for every two square miles while Pennsylvania ranked second in this respect with a pool for every 51 square miles of territory. Maryland was third with one pool to every 155 square miles.

In table 9 the mean number of pools was found to be 151 per state. The mean number of square miles (area) to one pool was 1,412 and the mean number of people to one pool was 23,832. According to these figures, Texas is far ahead of the average state.

Comparison of Lists of Pools from Different State Health Departments

According to the 1937 Recreation Yearbook:

TABLE 9

SWIMMING FACILITIES UNDER STATE HEALTH DEPARTMENTS OF U.S.†

Name of State	No. of pools	No. other Facilities	All Facilities	Area of states Sq. Mi.	Area per pool	Pop. of State 1920	Ave. No. Persons to Pool
Ala.	107	12	119	51,279	431	2,347,295	19,725
Del.	13		13	1,965	151	223,003	17,154
Ind.	70		70	36,045	515	2,930,544	41,865
Iowa	92		92	55,586	604	2,403,603	27,213
La.	21		21	45,409	2,162	1,797,798	85,609
Me.	12		12	29,895	2,491	767,996	63,833
Md.	64		64	9,941	155	1,449,610	22,650
Minn.	102		102	80,858	794	2,386,371	43,636
Miss.	41		41	46,362	1,130	1,789,162	10,737
Mont.	27	24	51	146,201	2,866	547,593	12,422
N. H.	29		29	122,503	4,224	360,247	4,838
Nev.	16		16	109,821	6,864	77,407	9,196
Ore.	83		83	95,607	1,152	763,385	10,042
Penn.	624	244	868	44,832	51	8,720,159	1,035
R. I.	400	63	463	1,067	2	640,397	16,504
Tax.	250	32	282	262,398	930	4,661,027	8,026
Utah	56		56	82,184	1,467	449,446	10,829
Wis.	61	182	243	55,256	238	2,631,829	23,389
Total			2,625	1,277,209	2,5423	34,910,859	428,973
Mean			151	70,965	1,412	1,910,812	23,832

†These figures compiled from replies from 18 States, a fair cross section of the United States.

TABLE 10

RANK OF STATES ACCORDING TO NUMBER OF FACILITIES, AVERAGE AREA TO ONE POOL AND AVERAGE NUMBER OF PERSONS TO ONE POOL*

Rank	Ranked on basis of facilities		Ranked on basis area to one pool		Ranked on basis of Persons to 1 Pool	
	Facilities	State	Area	State	Persons	State
1	868	Penn.	2	R. I.	1,035	R. I.
2	463	R. I.	51	Penn.	4,838	Nev.
3	282	Tex.	151	Del.	8,026	Utah
4	243#	Wis.	155	Md.	9,196	Ore.
5	119	Ala.	228	Wis.	10,042	Penn.
6	102	Minn.	431	Ala.	10,737	Mont.
7	92	Iowa	515	Ind.	10,829	Wis.
8	83	Ore.	604	Iowa	12,422	N. M.
9	70	Ind.	794	Minn.	16,504	Tex.
10	64	Md.	930	Tex.	17,154	Del.
11	65	Utah	1,130	Miss.	19,725	Ala.
12	56	Mont.	1,152	Ore.	22,650	Md.
13	41	Miss.	1,467##	Utah	23,750	Minn.
14	29	N. M.	2,162	La.	27,213###	Iowa
15	21	La.	2,491	Ne.	41,865	Ind.
16	16	Nev.	2,866	Mont.	43,636	Miss.
17	13	Del.	4,244	N. M.	63,833	Me.
18	12	Me.	6,864	Nev.	85,609	La.

Mean Number of Pools--151

Mean Number Sq. Miles (area) to one pool 1-412

Mean Number people to one pool--23,832

* These figures from Table 9

As in 1936, bathing beaches ranked first in participation, the figures totaling over 75 million. One hundred nineteen cities reported having 321 indoor pools with seasonal participation of 3,727,959. Three hundred seventy-seven cities reported having 842 outdoor pools with seasonal participation of 25,700,004. Seventy of these pools were reported opened in 1937 for the first time. Large increases over 1936 figures were recorded for practically all activities while at the same time, the number of cities reporting participation was smaller in each case. According to the figures submitted, the most popular activities are swimming, baseball, and softball.²

Letters were sent to the State Health Departments of the forty-eight states in the United States asking for the number of pools in their state. Thirty-six states made replies to the inquiry sent them. Since all the forty-eight states did not make the necessary response, information from eighteen states was used. The figures in tables 9 and 10 were compiled from replies from eighteen states, a fair cross-section of the United States. The swimming facilities as shown in table 11 are under the direction of State Health Departments of the several states.

The survey showed that there was a total of 2,625 pools, 1,277,209 square miles of territory, and a total population of 34,910,839. The mean number of facilities was found to be 151 pools per state; the mean number of square miles per state was 70,965; the area per pool was 1,412 square miles; the mean population per state was 1,910,812.

²"Community Recreation Leadership, Facilities and Activities in 1937," Recreation Magazine, June, 1938, p. 129.

Data Concerning Adult Swimming

Two hundred questionnaires were filled out by 200 college men and women from different parts of the state. The purpose of the questionnaires was to determine, if possible, the amount and kind of participation, the seasons in which they participated, the previous experience in swimming, the Red Cross Membership, and the general opinion toward swimming as an activity.

The data showed that there were 93 per cent of the men who swam, 99 per cent liked to swim and 96 per cent of them learned to swim as a child. There was quite a difference in the number and per cent of women swimmers. About 53 per cent could swim, 37.3 per cent liked to swim, but only 17 per cent of the women learned as children. About 90 per cent of the men learned to swim in unsupervised places while 55 per cent of the women learned to swim in college. This high percentage was probably due to the fact that the survey was with college students.

Of the women 74.5 per cent had an average of twenty lessons each while of the men 13 per cent had an average of eight and three elevenths lessons.

The percentage of women that swam more than two strokes was relatively low while only 9 per cent did any diving at all. The percentage for the men was somewhat higher with 40 per cent swimming the side stroke, 53 per cent the crawl stroke, and 75 per cent doing some form of dives.

Approximately 75 per cent of the men and 40.9 per cent of the women said that they could swim for ten minutes without rest. There is a possibility that a good percentage of these could not accomplish this feat.

97.5 per cent of the women and 78 per cent of the men swam only during the summer months. Only two women and five men swam the year round, while 21 per cent swam occasionally in the fall, winter, and spring.

Five men used Y. M. C. A. pools and one woman used the Y. W. C. A. pools. The public pools were more widely used than any other kind, there being a total of 70 people of the 200 who used the public pools. Sixty-five men and 24 women swam in places other than pools or camps. This gave a total of 37 people of the 200 who swam in places without any supervision.

One hundred per cent of the men and women thought swimming was a good exercise and the fact that 145 of the 200 who swam would indicate the popularity of swimming as a recreational activity. One hundred forty-seven of the 200 said they liked to swim while there were only 8 of the 200 who said they did not like to swim. The probable reason for these few not liking swimming was because of fear or lack of facilities.

Only seven men and two women who answered the questionnaire were members of the American National Red Cross Life Saving Corps. This is very good evidence that this form of water safety should be encouraged.

TABLE 11
 INFORMATION IN REGARD TO WOMEN WHO SWIM

Information Requested in Questionnaire	Replies				Total
	Yes		No		
	No.	Per Cent	No.	Per Cent	
Do you swim?	93	93	7	7	100
Do you like to swim? .	99	99	1	1	100
Did you learn as a child?	96	96	4	4	100
as an adult?	4	4	96	96	100
Did you learn in school?	5	5.33	88	94.62	93
in college?	1	1.07	92	98.93	93
in camp?	4	4.30	89	95.70	93
in other places? . .	83	88.90	10	11.10	93
Have you had at least five lessons?	13	13	37	37	100
Do you swim the side stroke?	40	40	60	60	100
crawl stroke?	53	53	47	47	100
breast stroke	35	35	65	65	100
back stroke?	30	30	70	70	100
float?	37	37	63	63	100
Do you do the front dive?	35	35	65	65	100
Swan dive?	20	20	80	80	100
Jack-knife dive? . .	15	15	85	85	100
Can you swim continu- ously for ten min- utes?	75	75	25	25	100
Do you swim the year round?	5	5	95	95	100
Do you swim occasion- ally in the Fall, Winter, and Spring?	17	17	83	83	100

TABLE 11--Continued

Information Requested in Questionnaire	Replies				Total
	Yes		No		
	No.	Per cent	No.	Per cent	
Do you swim in the summer only?	73	73	22	22	100
Do you think swimming is a good exercise?	100	100	0	0	100
If you do not swim, do you desire to learn?	5	5	1	1	100
Are you a Red Cross Life Saver?	7	7	93	93	100
Do you know any crippled persons benefited by swimming? . .	21	21	79	79	100
Do you use a					
Y. M. C. A. pool?	5	5	95	95	100
club pool?	4	4	96	96	100
camp pool?	12	12	88	88	100
private pool?	17	17	83	83	100
municipal pool? . . .	27	27	73	73	100
public pool?	47	47	53	53	100
another pool?	65	65	35	35	100

TABLE 12

DISTRIBUTION OF APPROXIMATE AGES OF 100 MEN ANSWERING THIS QUESTIONNAIRE

Age	Number
15-19	6
20-24	34
25-29	33
30-34	15
35-39	6
40-44	3
45-49	3

TABLE 13
 INFORMATION IN REGARD TO ADULT MEN WHO SWIM

Information Requested in Questionnaire	Replies				Total
	Yes		No		
	No.	Per cent	No.	Per cent	
Do you swim?	50	50	50	50	100
Do you like to swim? .	48	87.3	7	12.7	55
Did you learn as a child?	17	34	33	66	50
as an adult?	33	66	17	34	50
Did you learn in school?	1	1.9	50	98.1	51
in college?	23	55	23	45	51
in camp?	1	1.9	50	98.1	51
elsewhere?	21	42.2	30	57.8	51
Have you had at least five lessons?	35	74.5	12	25.5	47
Do you swim the side stroke?	19	19	31	31	100
Crawl?	16	16	34	34	100
Breast stroke?	14	14	36	36	100
back stroke?	22	22	78	78	100
float?	34	34	66	66	100
Do you do the front dive?	6	6	94	94	100
Swan dive?	3	3	97	97	100
Jack-knife?	1	1	99	99	100
Can you swim continu- ously for ten min- utes?	13	40.9	26	59.1	44
Do you swim the year round?	22	4	47	96	49
Do you swim occasion- ally in the Fall, Winter, and Spring?	44	7	39	93	43

TABLE 13--Continued

Information Requested in Questionnaire	Replies				Total
	Yes		No		
	No.	Per cent	No.	Per cent	
Do you swim in summer only?	33	97.5	1	2.5	39
Do you think swimming is a good exercise?	55	100	0	0	55
If you do not swim, do you desire to learn?	40	80	10	20	50
Are you a Red Cross Life Saver?	2	4.1	47	95.9	49
Do you know any crippled persons benefited by swimming? . .	27	31	60	69	87
Do you use a					
Y. M. C. A. pool?	1	1.18	84	98.82	85
Club pool?	2	2.36	83	97.64	85
camp pool?	6	7.07	79	93.93	85
private pool?	11	14	74	86	85
municipal	16	21.2	67	78.80	85
public?	23	27	62	73	85
elsewhere?	24	28.2	61	71.8	85

TABLE 14

DISTRIBUTION OF APPROXIMATE AGES OF 100
WOMEN ANSWERING THIS QUESTIONNAIRE:

Age	Number
15-19	5
20-24	19
25-29	23
30-34	12
35-39	6
40-44	6
45-49	7
No replies	17
Total	100

In regard to the 200 persons mentioned in the preceding four tables, 48 of them know of 102 cripples who had gained some relief or benefit from swimming.

For the 44 who had received instructions an average of $8 \frac{3}{11}$ lessons were required for them to learn to swim.

The average age of the women who answered the questionnaire was between 25 and 29, while the greatest number of men's ages ranged between 20 and 24 years of age.

CHAPTER VII

GENERAL CONCLUSIONS

From time immemorial, man has been enticed by the lure of any natural water courses that might be found in or near his native habitat. Thus watermanship early assumed an important place in his existence, for the following necessary reasons:

- | | |
|------------------------|--------------------------|
| 1. Self-preservation | 4. Sepulcher |
| 2. Safety and survival | 5. Securing a livelihood |
| 3. Siege and attack | 6. Sport |

Early recorded history shows a much increased interest and a new intent in swimming as an educational development. In the ancient civilizations many were taught or encouraged to swim:

1. In youth, for bodily growth and vigor
2. The soldiers, for necessary intensive training in warfare.
3. Both men and women, as an essential cultural accomplishment.

There are many sources that reveal the status of swimming in those early periods, since we have discovered and deciphered:

- | | |
|--------------------------------|----------------------|
| 1. Hieroglyphics | 3. Ruins |
| 2. Inscription and pictographs | 4. Mural decorations |

- 5. Monuments and statues
- 6. Myths and legends
- 7. Early writings

Our civilization of today has reached a peak in scientific achievement and cultural and social progress. Education must keep pace or these benefits cannot be fully experienced. The history of swimming is synonymous with education. Today we learn to swim for:

- 1. Physical development
- 2. Social development
- 3. Psychological development
- 4. Safety development
- 5. Recreational development

In promoting physiological development, we swim to:

- 1. Encourage body growth
- 2. Develop strength and vigor
- 3. Acquire symmetry and beauty
- 4. Correct physical disability
- 5. Safeguard ourselves and others in emergencies or accidents through water activity.

Schools are recognizing that swimming not only is an excellent health builder but it is a necessary part of every child's education.

The tremendous growth of aquatic sports and the educational recognition given to this form of activity by the American Physical Education Association and other kindred organizations interested in the education of the youth seem to substantiate its value as an educational activity worthy of any school.

Because swimming is the only exercise where the person does not have to support his own body weight and because it consists of stretching, pulling, kicking, and pushing, all in a prone position, there is no better all-round exercise.

The remedial effects of swimming upon weakened organs of the body would alone justify its use in our daily activities.

Swimming continues to hold a most important place in the program of physical education. Doubtless, the reason for this is that swimming is not a matter of a formal class but a useful and delightful sport as well as an important safety device.

Our public schools in Texas have fallen short of their duty in failing to include more swimming pools as a necessary part of the school plant. The maintenance of pools in our larger schools is entirely possible as shown by the financial gain made by private and municipal pool owners. The money spent by school children and the public to enjoy the private pools could easily be diverted into a fund to pay for the construction of school pools.

The colleges in Texas are far ahead of the public schools in the per cent of pools owned and operated but there is a need for more pools and a greater participation even in our colleges.

Physical examinations are required by a majority of the schools and colleges for their swimmers and should be re-

quired by all of them.

Our municipal, club, and private pool operators could improve the safety practices around their pools. Required physical examinations would not only protect the swimmer but would protect the pool operator as well, for there are a number of drownings reported each year that were probably cases of heart failure.

The sanitary condition of the pools throughout the state would also be improved by physical examinations, for this would prevent any chance of mass infection. As a whole, all the pools except two or three were well protected against disease transfer and accidents from drowning but there is a need of voluntary safety services on many of our larger lakes and beaches.

Last year 3,313,911 people enjoyed the fun and values of swimming in 310 indoor pools in 122 cities, while 17,651,135 people swam in 700 outdoor pools in 308 cities. All of these pools were operated by recreational departments. Many new pools are in process of construction to meet the ever increasing demand for facilities, and leaders are being trained and are more in demand every day to give the type of service necessary to help people utilize, to the fullest extent, the recreational possibilities of this sport.

The Young Men's Christian Association of Texas maintains pools that will compare favorably with the best pools of the state on the basis of safety and sanitation. The participa-

tion at the Y. M. C. A. pools was greater than at other pools, due to the fact that the water was heated in winter and the pools were kept open in the evenings the year round.

The American National Red Cross is responsible for most of the safety measures practiced in our aquatic sports and their work is increasing.

Weather conditions are favorable for swimming in Texas and participation in this activity may be carried on for nine months out of the year in the southern part of the state.

Approximately 93 per cent of the men and 52 per cent of the women in Texas are swimmers. However, 65 per cent of the men and 24 per cent of the women swim in unsupervised places. Forty-eight of the 200 people questioned know of 102 cripples who had gained some relief or benefit from swimming.

APPENDIX

My dear _____:

As a graduate of the North Texas State Teachers College, I have chosen for my Master's Degree Thesis the study entitled, "The Educational and Recreational Value of Swimming in Texas."

Since there is very little material in published form regarding this subject, it is necessary to secure the information by means of interviews and questionnaires.

I shall appreciate it very much if you will fill in the questionnaire, for your answer will be a most valuable contribution to this study. A serial number has been provided to eliminate the necessity of signing your name, since identity will not be used in this study.

If you desire, a summary of this study will be sent you upon request. I shall appreciate the return of this questionnaire.

Please answer and return the questionnaire to:

Earle S. Woodall
Box 746
Stephenville, Texas

If, for any reason, you find it impossible to answer the questionnaire, please use the stamped envelope enclosed and return to the above address. This will assist materially the study.

Sincerely yours,

Earle S. Woodall

QUESTIONNAIRE

No. _____

Date _____, 19____

Name of Pool _____ Name of club or organization _____

City _____ County _____

Pool Dimensions

(A check mark () may be used where possible.)

Length of pool _____ Width of pool _____

Depth at deepest part _____ Depth at shallowest part _____

Kind of water used: (well water _____, river water _____,
lake water _____, hard _____, soft _____.)

Materials Used in Construction

Concrete _____, Tile _____, Concrete and Tile _____,

Concrete and Wood _____, Wood _____, Natural Basin _____.

Means of Financing the Upkeep of Pool

By the city or organization without charge to swimmers _____,

by a fee paid by the swimmers _____, by season tickets _____,

If by season tickets, what are the tickets worth? _____

Is the season ticket for twelve months? _____ For summer

months? _____ What is charged for an individual admit-

tance? _____

Equipment of Pool

Number of diving stands or platforms _____ Number of diving

boards _____ Height of boards _____ What are boards and

platforms covered with? Rubber _____, kapok _____, not cov-
ered _____.

What are walk ways and runways covered with? Rubber _____,
cocoa matting _____, other things _____

Sanitation

What is the capacity of your pool in barrels? _____
Do you have a filtering system? _____ How often is the pool
drained and cleaned? _____ Is there a continuous stream of
water running in and out of pool? _____ Do you use a germi-
cide in the water? _____ If so, what kind? _____
Do you use germicides and deodorants in your locker and
shower rooms? _____ Do you require bathers to take showers
before entering pool? _____ Is there hot and cold water
available? _____ Do you require bathers to use caps? _____
Do you require bathers to use foot bath before entering pool?
_____ Do you require a physical examination of those using
your pool? _____ Is the general public allowed to use your
pool? _____ If so, are they required to have a physical ex-
amination? _____ Is the pool water irritating to the eyes
and nasal passages? _____ Do pool conditions make disease
transfer probable? _____ Are regulations concerning the
health of the swimmer and the health conditions of the pool
and its surroundings rigidly enforced? _____ Have you had
any fatal accidents at your pool? _____ How long has pool
been in use? _____ What was the original cost of your pool?
\$ _____ Is it self supporting? _____ What was your
net proceeds for the past twelve months? _____ (Optional)
How many serious accidents have occurred at your pool in the

past twelve months? _____ How many minor accidents have been reported in the past year? _____ How many cases of eye infection? _____ ear infection? _____ nose infection? _____ throat infection? _____ How many cases of sinus infection have been reported? _____ How often is a bacteria count made? _____ How many cases of boils have been reported in the past year? _____ Can you estimate the number of people that have used your pool in the past twelve months?

Qualifications of Instructors and Instructions Offered

What training have your instructors had that will fit them for their positions? _____

Are they majors in physical education? _____ Minors in physical education? _____ Senior Red Cross Life Savers? _____ Red Cross Examiners? _____ Number of years in competitive swimming? _____

Pool Personnel and Operations

How many life guards do you employ? _____ Is your pool equipped with ring buoys? _____ With cane poles with rope attached? _____ Is your pool kept open after seven p. m.? _____ Is the water heated in winter? _____ How many men instructors do you employ? _____ How many women? _____ Do you have any women life savers? _____ How many classes of swimming do you have each day? _____ How many beginners classes do you have? _____ Intermediate? _____ Advanced _____

Do you offer Red Cross Life Saving Courses? _____ Estimate the number in each course or class. _____

Do you have a swimming team for men? _____ for girls? _____

Do you have a swimming team for boys? _____ for women? _____

How many meets did the team participate in last year? _____

Underline the events held in the meet: 50 yd. free style, 100 yd. free style, 50 yd. back stroke, 100 yd. back stroke, 50 yd. breast stroke, 100 yd. breast stroke, 150 yd. breast stroke, 150 yd. medley, 150 yd. medley relay, 400 yd. relay, low spring board diving, high spring board diving. Estimate the number participating in swimming events. _____ Diving events. _____

How long are children allowed to remain in the water at each period? one hour _____, two hours _____, no time limit _____.

Are Red Cross Tests offered for beginners? _____

Swimmers _____ Senior Life Saving, _____, Junior Life Saving _____, Examiners tests? _____ Boy Scout tests for swim-

ming? _____ Is the interest in water sports increasing or

decreasing? _____ Is water polo played at your pool? _____

Is water basketball played at your pool? _____

Please list other sports participated in at your pool.

1. _____

2. _____

3. _____

My dear _____:

As a graduate student of the North Texas State Teachers College, I have chosen for my Master's Degree Thesis A Study of Swimming Pools in Texas.

Since there is very little material in published form regarding this subject, it is necessary to secure the information by means of interviews and questionnaires.

I shall appreciate it very much if you will fill in the questionnaire, for your answer will be a most valuable contribution to this study. A serial number has been provided to eliminate the necessity of signing your name, since identity will not be used in this study.

If you desire, a summary of this study will be sent you upon request. I shall appreciate the return of the questionnaire for Physical Education and Swimming Instructors concerning facilities for and participation in aquatic sports.

Please answer the questionnaire and return to:

Earle S. Woodall
Box 746
Stephenville, Texas

If, for any reason, you find it impossible to answer the questionnaire, please use the stamped envelope enclosed and return to the above address. This will assist materially the study.

Sincerely yours,

Earle S. Woodall

Date _____, 19__

Name of School _____

City _____ County _____

Present enrollment _____ Kind of school: co-
educational, boys, girls, men, women.

Pool Dimensions

Length of pool _____ Width of pool _____

Depth at deepest part _____ Depth at shallowest part _____

Kind of water used: well water _____, river water _____, lake
water _____, hard, _____, soft _____.

Materials Used in Construction

Concrete _____, tile _____, concrete and tile _____, concrete
and wood _____, wood _____, natural basin _____.

Means of Financing the Upkeep of Pool

By the school without charge to swimmers _____, by a fee paid
by the swimmers _____, by season tickets _____. If by season
tickets, what are the tickets worth? \$ _____. Is the
season ticket for twelve months? _____ For the summer months
only? _____ What is charged for an individual admittance?
_____.

Equipment of Pool

Number of diving stands or platforms _____. Number of diving
boards _____. Height of boards _____. What are boards and
platforms covered with? rubber _____, kapok _____, Not cov-

ered _____. What are walks and runways covered with? rubber _____, cocoa matting _____. What is the capacity of your pool in

Sanitation

What is the capacity of your pool in barrels? _____.
 How often is the water changed? _____ Do you have a filtering system? _____ How often is the pool drained and cleaned? _____ Is there a continuous stream of water running in and out of pool? _____ Do you use a germicide in the water? _____. If so, what kind? _____ Do you use germicides and deodorants in your locker and shower rooms? _____ Do you require bathers to take showers before entering the pool? _____ Is there hot and cold water available? _____ Do you require bathers to use caps? _____ Do you require bathers to use a foot bath before entering the pool? _____ Do you require a physical examination of those using your pool? _____ Is the pool water irritating to the eyes and nasal passages? _____ Do pool conditions make disease transfer probable? _____ Are regulations concerning the health of the swimmer and the health condition of the pool and its surroundings rigidly enforced? _____ Have you had any fatal accidents at your pool? _____ How many serious accidents have occurred at your pool in the past twelve months? _____ How many minor accidents have been reported in the past year? _____ How many cases of eye infection? _____ ear infection? _____ nose infection? _____ throat infection? _____ have been reported to your school hospital.

Qualifications of Instructors and Instruction Offered

What training have your instructors had that will fit them for their positions? _____

Are they majors in physical education? _____ minors in physical education? _____ Senior Red Cross Life Savers? _____ Red Cross examiners? _____ Number of years in competitive swimming _____. How many life guards do you employ? _____

Is your pool equipped with ring buoys? _____ With cane poles with rope attached? _____ Is your pool kept open after seven p. m.? _____ Is the water heated in winter? _____ How many men instructors do you employ? _____ How many women? _____

Do you have any women life savers? _____ How many classes of swimming do you have each day? _____ How many are beginners classes? _____ intermediate? _____ advanced? _____ Do you offer Red Cross Life Saving courses? _____ Estimate the number in each course or class? _____. Do you have a swimming club for men or boys? _____ For girls? _____ Do you have a swimming team for men? _____ women? _____ boys? _____ girls _____. How many meets did the team participate in last year? _____. Underline the events held: 50 yd. free style, 100 yd. free style, 50 yd. back stroke, 100 yd. back stroke, 50 yd. breast stroke, 100 yd. breast stroke, 150 yd. breast stroke, 150 yd. medley, 150 yd. medley relay, 400 yd. relay, low spring board diving, high spring board diving. Estimate the number participating in swimming events _____. In diving events _____.

Credit Toward Graduation

How much credit is offered to men toward graduation for swimming? _____ For women? _____ How much credit toward required physical education is offered for swimming and diving? _____ How long are children allowed to remain in the water at each time? One hour _____, two hours _____, no time limit _____. Are Red Cross tests offered for beginners? _____, swimmers? _____, senior life saving? _____, junior life saving? _____, examiners tests? _____, Boy Scout tests for swimming? _____.

Is the interest in water sports increasing or decreasing? _____ Is water polo played at your school? _____ Is water basketball played at your school? _____

Please list the other sports participated in at your pool.

1. _____
2. _____
3. _____
4. _____

Stephenville, Texas

September 14, 1937

State Public Health Department

State of _____

Gentlemen:

I am making a comparative study of swimming as part of the work for the Master's Degree in the Denton Teachers College at Denton, Texas. Would you send me the number of swimming pools in your state that are under your supervision or jurisdiction.

I am enclosing six cents to cover the cost of postage.

Yours truly,

Earle S. Woodall

Questionnaire to Adults

This questionnaire is to help estimate the amount and extent of swimming by adults in the state of Texas.

INSTRUCTIONS: Please check "yes" or "no," as indicated. If you do not swim, please check questions 1, 10, and 12.

1. Do you swim? Yes ___ No ___ Do you like to swim? ___
Yes ___ No ___
2. When did you learn to swim? As a child? ___ As an adult?

3. Where did you learn to swim? In school? ___ In college?
___ In camp? ___ Elsewhere? ___
4. Have you had at least five or more lessons from an instructor paid for teaching swimming? Yes ___ No ___
5. How many days or lessons or periods did it take you to learn to swim? (approximately) _____
6. Can you swim in deep water for ten minutes? Yes ___ No ___
7. Do you swim all year round? Yes ___ No ___ Do you swim occasionally during the fall, winter and spring as well as in summer? Yes ___ No ___ Do you swim only in the summer? Yes ___ No ___
8. Check type of pool in which you swim? Y. M. C. A. ___, Y. W. C. A. ___, Club ___, camp ___, public ___, Private ___, municipal ___, others _____
9. Do you think swimming is a good recreative exercise? Yes ___ No ___.

10. If you do not swim, do you have any desire to learn?

Yes __, No __.

11. Are you, or have you ever been, a Red Cross Life Saver?

Yes __, No __.

12. Do you know of any person, or persons, who have been helped in overcoming physical handicaps resulting from accidents, paralysis or other causes, by taking swimming? Yes __, No __. How many? _____

Name of city in which you live _____

How many years have you lived there? _____

Age _____, Man _____, Woman _____

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