

MaccCallum

*The Book of the Marimba*

Carlton



## P R E F A C E

The purpose of this book is to bring to the attention of the public the potentialities and glory of the marimba, a musical instrument neglected for many years but now winning meritorious recognition. Since all other musical instruments of importance have been the object of scholarly research, it is high time for a comprehensive treatment of the marimba to be presented.

To this end I have done considerable research and have contacted persons who are informed on the subject personally or by correspondence and, finally, after years of effort, have accumulated much information, often with great difficulty. It is singular that there is practically nothing about the marimba of any value from the usual sources. Thus my research began without previous convictions and prejudices.

My first knowledge of the marimba's construction came from a Mr. Bell from Mexico, whose full name I have forgotten after a lapse of forty years. I had met and gained inspiration from Celso Hurtado whose father was instrumental in bringing the marimba to perfection in Guatemala.

I am greatly indebted and thankful to those who have aided my research, particularly the Deagan Company, Inc. of Chicago, a pioneering agency in the bar-percussion field, and, more recently, the Musser-Kitching Division of Ludwig Drum

Company has been most gracious in supplying photographs and much needed information. Considerable coöperation was had from Mr. Edwin L. Gerhardt of Baltimore who has done a vast amount of research on the marimba which has not gone unrecognized. He maintains an exhibit of bar-percussion instruments for the edification of interested persons.

Mr. Del Roper of Monrovia, California has been most generous in sharing his knowledge of tuning and the acoustics involved. He is an expert marimba builder and a virtuoso on the instrument.

Mr. Howard M. Peterson of Hollywood has been most helpful and encouraging towards my efforts. He is an instructor in marimba, virtuoso, text book writer and has published many arrangements for the marimba.

Both Miss Vida Chenoweth, the first nationally and internationally famous concert artist on the marimba, and Mr. James M. Dutton, instructor and concert artist (at The American Conservatory of Music in Chicago) have given me support.

Throughout the years, correspondence and meetings with Mr. Clair Omar Musser have yielded much information. He is mostly responsible for the recognition of the marimba in our time, having devoted his career to that objective.

Mr. Gordon Peters, founder of the famous "Marimba Masters" ensemble of The Eastman School of Music, Rochester, has given great assistance, especially in his writings on percussion instruments.

Mr. James L. Moore, of Ohio State University and one of the founders of The Percussive Arts Society, has aided me in his enthusiasm for the cause of bar-percussion instruments—especially since he is in agreement with me in perceiving the need for marimbas of larger range.

Finally, I am indebted to Professor Leon Denny Moses and Dr. C. L. Sonnichsen of the English Department of The University of Texas at El Paso for their aid in the preparation

of my manuscript.

The author is appreciative also of the interest of Mr. Richard D. Escontrias in this work, whose knowledge of foreign languages was helpful.

Thus I offer my knowledge of the marimba to the public, hoping to further the recognition of its potentialities (mostly unknown) for the benefit of our musical culture.

Frank K. MacCallum,  
El Paso, Texas  
January, 1968



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in the bass:



we have, thus their instruments are smaller in that sense.

## II. THE MARIMBA OF GUATEMALA

There are two distinct types of marimbas in use at the present time, (1) that of Central America (particularly Guatemala) and (2) the type manufactured. Thus it can be seen that the marimba in its perfected form is peculiar to the New World. The xylophone is European, and may be dismissed as constituting the high treble of the marimba; but the marimba may be thought of as the logical development of the xylophone large enough for serious musical purposes.

The Guatemalan marimba is unique because of the method used in producing sound which also enables it to have a compass comparable to that of the piano. It was perfected by Sebastián Hurtado of Guatemala, who desired to make a *bona fide* marimba on which European music could be played instead of merely native airs. Discarding the gourd resonators of the primitive instruments around him and using the flaring wooden boxes and increasing the number of notes to five and one-half octaves *chromatic*, he produced the prototype of the modern marimba.

Hurtado introduced the double keyboard with bars arranged like the black and white keys of the piano and in the same order. At last the marimba became a full-fledged musical instrument, this about 1894. Other Guatemalans aided in the development of the new marimba, notably Mariano Valverde, musician and composer who worked closely with the Hurtados helping them to develop the chromatic marimba. Rosendo Barrios in his construction of marimbas standardized the dimensions of the resonators. Corazon Borres is not to be forgotten—he introduced and developed the marimba in Mexico.

Aided by the Latin Americans' innate love for music, the new marimba quickly became popular in Central America. It can be heard to the point of satiety in Guatemala, where it is regarded as the national musical instrument. In that country if a man has many children of graduated sizes he is said to have a "perfect marimba of a family."

Since marimbas are found chiefly in tropical regions the hard wood growing may be the reason. Such wood in small pieces gives a clear, metallic sound when struck. The wood used most for marimbas in Central America is that of the female *hormingo*\* tree, reddish in color. It is cut down at certain phases of the moon. This tree (*platymiscum dimorphandrum*) grows abundantly in the southern and western regions of Guatemala. Only the best portion of the log is used, where the grain is straight and free from cracks. If the tree has been struck by lightning, so much the better. Having been cut into small pieces the wood is dried in ovens for half a year to season it well. This practice is not unknown among manufacturers of marimbas in the United States.

\*Also *hormigo* and *hormiguillo*.



of the mandocello, but is much more pleasing in every respect. There is also a pronounced resemblance to the saxophone and bass clarinet especially in forte passages.

The extreme low notes bring to mind a combination of the contra-bassoon and the tuba. \* \* \* Deagan Nabimbas have the lowest range of any instrument in the Marimba family and can be had in any scale or range up to and including 5 octaves,  $C_4$  to  $C_{64}$  chromatic. . . . The Deagan Nabimba is made to order only.

Later they were offered in any size up to *seven* octaves. About fifty nabimbas were made. Today their unique reed tone and hollow bass can be heard only from old phonograph records. In losing the nabimba symphonic music has lost a bass percussion instrument that blended perfectly with the other orchestra instruments, better than the ordinary marimba does.

The catalog neglected to state that the nabimba could imitate to perfection a sustained tone, making one think that a real saxophone or clarinet was being played.

In this period, 1915-1920, bar-percussions were offered in many sizes, as is so evident in the sumptuous catalogs the companies published. There was no restricting the marimba, it was available in any size one would want:

#### DEAGAN MARIMBA-XYLOPHONES

No. 4630 — 37 bars 3	octaves, $F_{21}$ to $F_{57}$ —	\$210.00
No. 4622 — 44 bars $3\frac{1}{2}$	octaves, $F_{21}$ to $F_{64}$ —	\$260.00
No. 4624 — 49 bars, 4	octaves, $C_{16}$ to $C_{64}$ —	\$310.00
No. 4626 — 54 bars, $4\frac{1}{2}$	octaves, $C_{16}$ to $F_{69}$ —	\$375.00
No. 4628 — 61 bars, 5	octaves, $G_{11}$ to $G_{71}$ —	\$475.00
No. 4630 — 68 bars, $5\frac{1}{2}$	octaves, $F_9$ to $C_{76}$ —	\$560.00
No. 4632 — 73 bars, 6	octaves, $E_8$ to $E_{80}$ —	\$625.00

The subscript figures indicate the corresponding note on the piano counting up from the left. Deagan very carefully identified the bars this way indicating without a doubt what the range of his instruments were. Other manufacturers could not see the need for this and until comparatively recent times merely said "four octaves from C to C" in their catalogs.

It seemed to be considered a good thing to append the word "Xylophone" to "Marimba". Perhaps that gave it respectability. Today the marimba has its own name and identity and no grovelling is necessary.

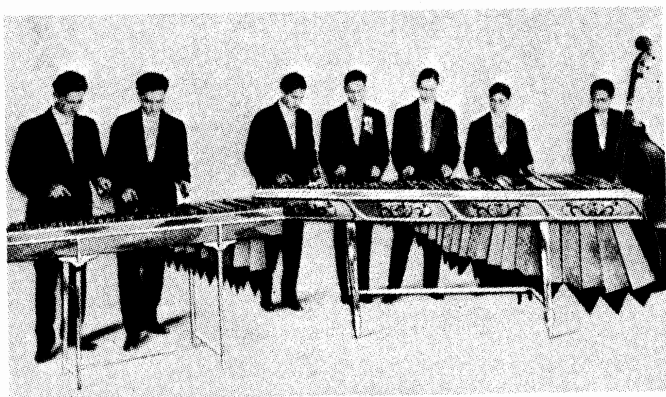
The nabimba was well represented in many models:

#### THE DEAGAN NABIMBA

No. 7040 — 25 bars, 2	octaves, $F_{33}$ to $F_{57}$ — \$190.00
No. 7044 — 37 bars, 3	octaves, $F_{21}$ to $F_{57}$ — \$340.00
No. 7048 — 37 bars, 3	octaves, $F_9$ to $F_{45}$ — \$480.00
No. 7050 — 42 bars, $3\frac{1}{2}$	octaves, $C_{16}$ to $C_{57}$ — \$440.00
No. 7052 — 44 bars, $3\frac{1}{2}$	octaves, $F_9$ to $C_{52}$ — \$520.00
No. 7054 — 49 bars, $3\frac{1}{2}$	octaves, $F_9$ to $F_{57}$ — \$560.00

In addition there was the five-octave nabimba beginning, as another catalog states, with  $C_4$  the lowest C on the piano.

The Deagan Company introduced a most novel instrument, the *marimbaphone*. Its two rows of bars could be turned upwards (the resonators then being horizontal) for playing on the ends of the bars with horsehair bows to produce a truly sustained sound. Ends of the bars were curved inward to receive the bow. Marimbaphones could be played with mallets when the bars were in their usual position. Steel bar marimbaphones were made too, though metal bars already have a long lasting sound.



The Hurtado Brothers Royal Marimba Band  
of Guatemala



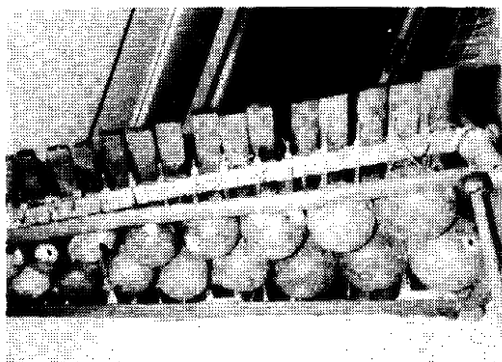
2



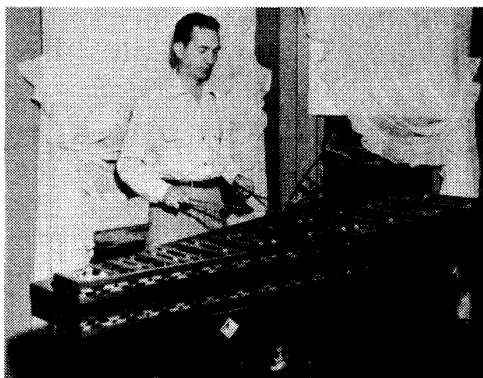
Primitive African Marimba

3

African Marimba with  
Spherical Gourd Resonators



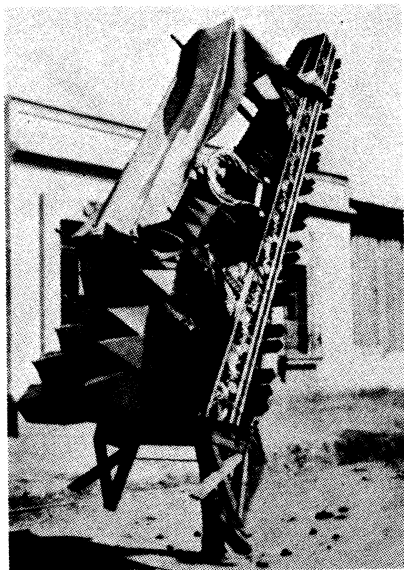
4



Small Guatemalan Marimba  
with Chromatic Keyboard

Large Marimba Being Carried on  
a Man's Back

5



Unlike the player piano, the marimba was victimized and its abridgement of range (beginning in 1920) was a resounding success, establishing an *anti-bass* attitude on the part of the manufacturers and musicians which is herewith being challenged.

Apart from this, at the present time there is a very high standard of excellence maintained in the manufacture of marimbas and other bar-percussions. The rosewood is carefully chosen, tested by X-ray for defects, and well-seasoned. And the tuning is of the highest order. Thus the future for the marimba is promising.

#### IV. OBSERVATIONS AND COMMENTS MADE BY VARIOUS MUSICIANS AND WRITERS

Musicologists and reference works have been very incorrect in their treatment of the marimba. Bar-percussions had been considered unimportant and slighted accordingly—except for the xylophone, which being European, has been considered far superior to the marimba. The following exhibit of misinformation culled from many articles, definitions and opinions of musical authorities bears out my contention:

The marimba has “sticks, struck by sticks” [How effective is alliteration in prose!] It has exactly 23 “slabs” of wood. It is suitable only for potpourris and slow, cantabile style of music. It has two octaves; has three octaves. It is a drum, a kind of harmonica, a set of musical glasses, and a kind of xylophone. It rests on a “wooden base.” Classical music is never played on the marimba—that is for the xylophone. In Central America dried fruits hang under



each key for resonance. [!!!] There, the resonators are boards, each covered at the end with a bladder. In due time (written in 1918) the "steel marimba" may win acceptance by serious musicians. [I have been waiting with bated breath these many years to witness this thing.] A marimba concerto is a "freak concerto." [Composers, beware. How odd it would be to see on a program "Freak Concerto No. 1 in F♭.]

Even to this day the xylophone's bars rest on—ropes of straw, bells of straw, and/or a bed of straw. The xylophone is struck with "beaters" [crude language!] or it is sounded by rubbing with resined cloth. There is very little difference between the xylophone and the vibraharp. [!!!] The latter instrument has "fans" or "propellers" in its resonators which take the sound and allow a single chord to last a long time by "pressing down" into the resonators. [Any other way would be difficult and hard to understand.] Furthermore, for an "eerie effect" rapid playing of arpeggios on top of the compass [a direction finder?] is advised, allowing the propellers to mix all the sounds together. [Those propellers certainly have a variety of duties.]

One treatise on orchestration that came to my attention has a good picture of a 4-octave xylophone with resonators, and passes off a picture of a little set of orchestra bells on a stand for the likeness of a marimba.

In connection with the foregoing, the marimba has been confounded with the *marimbula*, a primitive instrument found in the islands of the Caribbean, having prongs to be plucked, and the Hungarian *czimbalom* whose tones are elicited by striking the strings with wooden spoon-shaped mallets. All humor aside, in separating the wheat from the chaff and recog-

nizing authorities who *are* interested in the marimba and bar-percussions, the following intelligent observations from John Redfield's *Music, a Science and an Art* written in 1925 are offered:

Wood and metal percussive instruments of definite intonation have for the most part received but slight recognition by symphonic composers. The celesta has won an established position in symphonic music, but the xylophone, the orchestra bells and the marimba, has as yet been excluded from the symphony orchestra. \* \* \* The xylophone, the orchestra bells and the marimba, are all splendid instruments of distinctive tone quality and great future possibilities; either one of them is much superior to the dulcimer at the time Cristofori converted it into a piano by giving it a keyboard. Indeed, Mustel, in producing the celesta has already given a keyboard to the upper compass of orchestra bells, but their lower compass should have a keyboard as well.<sup>8</sup>

In *Instrumental Music in the Public Schools* by Theodore Normann is the statement that the marimba has achieved popularity as a legitimate band instrument, blends well with wind ensembles, can amplify a harmonic background and give a certain solidity of tone. For a light arpeggio accompaniment it is almost indispensable.<sup>9</sup>

The *Oxford Companion to Music* in 1943 correctly describes the marimba and gives it its due, remembering the nabimba and Percy A. Grainger's interest in bar-percussions. This work says that there was a constructive interest in such instruments in Paris and mentions a Charles de Try whose improved xylophone was called a *tryphone*.

The now defunct *Etude Music Magazine* had informative articles about the marimba, often illustrated. Mr. Clair O. Musser contributed several such articles to the *Etude*. In one

of them, *The Marimba-Xylophone* he says:

Standard compositions of the masters, old and new, lend themselves to a faithful interpretation [on the marimba]. Chopin's works are suited to this instrument. Modern composers are beginning to be alerted to the individual tone color of this new instrument.<sup>10</sup>

He adds that Charles Martin Loeffler's *Evocation*, then performed by the Cleveland Orchestra, has both the marimba and vibraharp featured prominently; and says that the pioneer orchestra in using a marimba was that of the University of Illinois at Urbana. Mr. Musser deploras the former lack of seriousness with which the marimba was regarded, and has made a career in elevating it to the plane of recognition, and that with success. He has spent many years in research on the marimba and allied instruments. Formerly he was connected with the J. C. Deagan Company but later began manufacturing marimbas himself. The firm he started is now the Musser-Kitching Division of The Ludwig Drum Company.

It was due to Mr. Musser that the Northwestern University at Chicago offered instruction in the marimba with a major in it. He has been the teacher of most of the marimba virtuosi of our present day, and has composed much music for their instrument.

Mr. Gordon Peters has done a great service for the marimba. He organized The Marimba Masters at the Eastman School of Music, Rochester, New York. His purpose was to enlarge the scope of percussion to include melodic instruments also. The result was this marimba band, which soon outgrew the experimental stage and began to be seen and heard on TV and records. This in the year 1954. The Marimba Masters was the first nationally known and acclaimed organization of its kind in these latter days.



Miss Vida Chenoweth is distinguished among the many marimba virtuosi of today in that she has obtained national and world fame, and is one of the few who have been a full-time concert artist. Her interest in the marimba began in her childhood. In later years, when she became proficient at the marimba and when her intentions were discernible, she was advised that "the marimba is not only a rare instrument but an unworthy one with vaudeville associations that condemned it forever as lacking in dignity." (The author had been warned with similar admonitions, too.) Miss Chenoweth observed that the marimba was slighted in orchestra textbooks, and had not yet come to the attention of serious composers, and was omitted from encyclopedias. She presented the instrument and her playing to various composers with the result that Bernard Rogers, Jorge Sarmientos, Darius Milhaud, Villa-Lobos and Robert Kurka, all made worthy additions to marimba literature in addition to the works of lesser known composers.

Mr. James N. Dutton of the American Conservatory of Music, Chicago, is a nationally renowned artist-teacher of the marimba and the vibraharp. He has conducted instrumental ensembles and appeared as a marimba soloist in prominent orchestras in addition to the many successful recitals he has given. Also he has written many published articles on the marimba.

Carolyn Reid and Doris Stockton are among the eminent virtuosi on the marimba, the former being the first marimba major in history, the degree having been conferred by The Northwestern University of Chicago.

The International Guild of Mallet Percussionists was founded in 1957 by Carolyn Reid Sisney who was secretary at that time. Notable among contemporary musical publications concerning percussions is *Percussive Notes*, and the *Percussionist*, edited by James L. Moore of Ohio State University and who is board member of the new *Percussive Arts*

Society (PAS). Mr. Moore champions marimba ensemble playing and desires the inclusion of bass marimbas in them.

In Europe the marimba is no longer a stranger. It has been manufactured in England, and is known in Germany, France and even in the northernmost part of Finland.

Japan figures largely in the recognition of the marimba. Beginning in the 1940's Yoichi Hiraoka, virtuoso on the instrument, has become famous and continues his career at the present time.

In Japan there are about 1000 marimbists who are members of the Japanese Xylophone Association of which Mr. Kameyoshi Ito is director. (In Japan a marimba is usually called a xylophone.) Mr. Saburo Mizuno manufactures marimbas in that country, using rosewood from Thailand. The author has corresponded with both of these gentlemen.

It becomes obvious that the marimba is increasing in importance, and the purpose of this book is to point the way for new accomplishments in this line of musical endeavor.

## V. ENSEMBLE PLAYING—WITH ACCENT ON THE BASS

Playing many marimbas together, as is most appropriate, has been done many times in the past forty or so years. It was Mr. Clair O. Musser who organized these marimba orchestras. At first, under the auspices of the J. C. Deagan Company, in 1930, the group was fifteen in number. In August, 1933, one hundred marimbas played together at the Century of Progress Exhibition in Chicago. In 1935 Mr. Musser founded the International Marimba Symphony Orchestra also of one hundred players. They performed with great success in Paris and elsewhere in Europe. Also in 1935 was their successful Carnegie Hall appearance, of which the New York Times speaks:

# 1.

Adagio.  
8ve up

loco

**[1]** **[2]** Allegro.

cresc. *ff* *pp* *p*

# 2.

R.H.

L.H.

3.

MARIMBA

R.H.

R.M.

L.H.

4.

MARIMBA

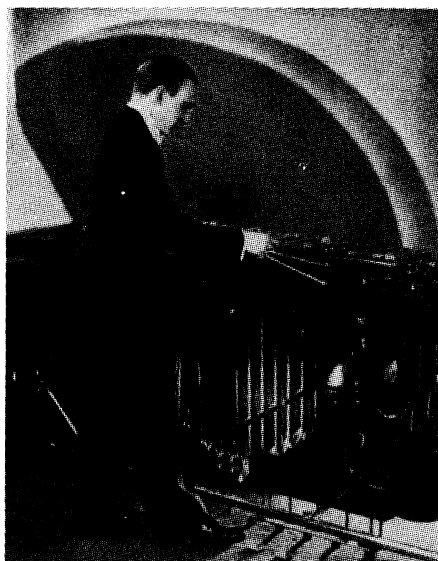
R.H. (4 Mallets)

slowly

p

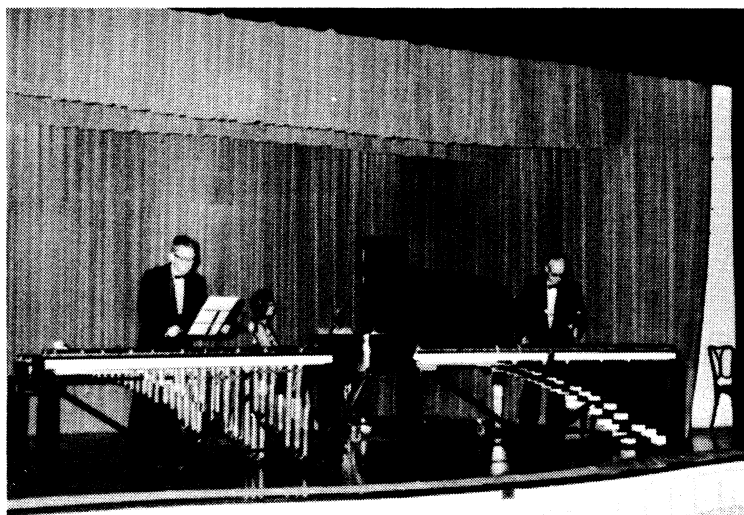
L.H.

piano accompaniment.



36

Clair Omar Musser at Special Marimba of his own Construction



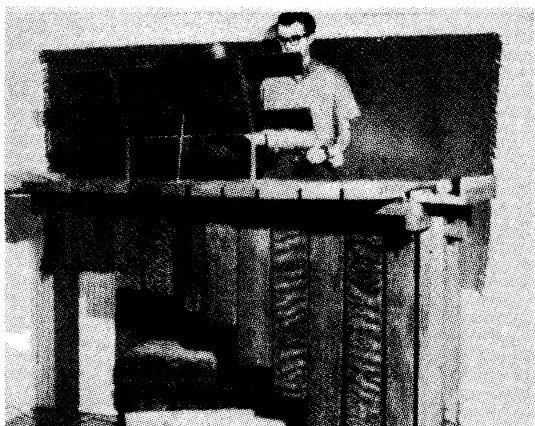
Stage during Frank K. MacCallum's Marimba Concerts. Left: Nabimba. Right: Marimba of extended range.

31



The Marimba Masters—Organizer  
and Director, Gordon B. Peters,  
center

32



Bass Marimba made by Harry  
Partch for his Ensembles



The Author's Copper-Tube Marimba (Bass resonators are wooden) Rex Brown, left

All these records have been discontinued long ago. Those of the Hurtado Brothers were recorded in 1915, of the Blue and White *circa* 1924. The disks made in recent years may still be available. In any case browsing around in second-hand record shops may result in some interesting purchases.

Recordings of the Hurtado Brothers' Royal Marimba Band, Victor Records. (On Columbia Records this organization is called Royal Marimba Band.)—

Selections from Aïda (Verdi)	
Sextette from Lucia (Donizetti) . . . . .	Victor 35559
Intermezzo from Cavalleria Rusticana (Mascagni)	
Fading Leaves (H. E. Carrol) . . . . .	Victor 18048
Blue Danube Waltz (Strauss)	
Southern Roses Waltz (Strauss) . . . . .	Victor 35564
Thousand and One Nights Waltz (Strauss)	
Blue Waves Waltz (Valverde) . . . . .	Victor 35565
Artist's Life Waltz (Strauss)	
American Airs—Medley . . . . .	Victor 35557
Stars and Stripes Forever (Sousa)	
Love's Power Waltz (Santamaria) . . . . .	Victor 18092
The Flag of Guatemala (V. Hurtado)	
Chaste Susanna (Hilbert) . . . . .	Columbia A-1936
Catalina—One Step (Hurtado)	
Fletita—One Step (J. B. Hurtado) . . . . .	Victor 18095
Pique Dame Overture—excerpt (Von Suppé)	
Poet and Peasant Overture—excerpt (Von Suppé)	
. . . . .	Columbia A-1832



Recordings of The Blue and White Marimba Band—

Marimba March.

Colombia Waltz (Mariano Valverde) . . . . Victor 17928

El Relicario (Padilla) . . . . . Victor 18749

Other recordings from the distant past. Imperial Marimba Band—

Rivoli (Cobey) . . . . . Edison (disk) 50764-R

Serenade d'Amour (Blon)

Salomé—Intermezzo (W. Loraine)

. . . . . Edison (disk) 50589

Meritorious xylophone solos. Sam Herman, soloist with piano—

Al Fresco (Victor Herbert)

Mighty Lak' a Rose (Nevin) . . . . . Victor 20558

George H. Green, xylophonist with orchestra—

Triplets—F.T. (G. H. Green) . . . . . Edison 50625

Triplets *and* Rainbow Ripples (Green) . . Victor 19944

Three Columbia records, 369-M to 371-M, of the Marimba Orquesta Típica Lerdo. Mexican folk music (dances), titles:

Ocozocoautla (Son), El Zihualteco;

Zandunga Chiapaneca, Las Chiapanecas;

El Rascapetate, Sones Chiapanecas.

About 1940 Decca Records (Album No. 166) presented *A Xylophone Recital of Classical Music* played by Yoichi Hiraoka, a marimba virtuoso from Japan. The selections included Bach, Brahms, Gluck, Haydn, Monti, Mozart and Saint-Saëns.

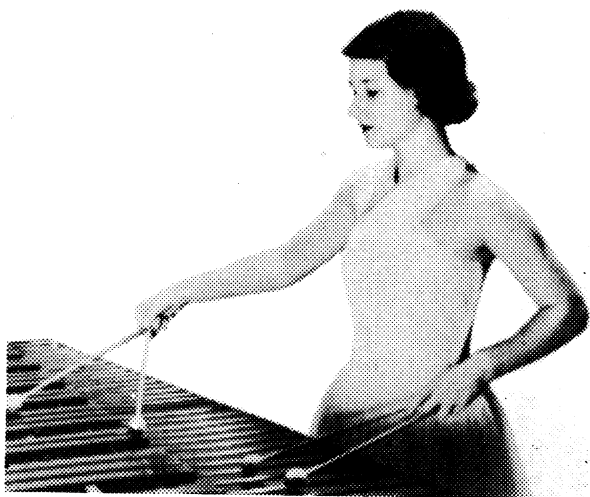
Harry Partch issued a record in 1953 of his music played on instruments of his own devising and construction. *Plectra and Percussion Dances*—Gate 5 Ensemble. Among the instruments his marimbas, and bass marimba sound out prominently.

The Marimba Masters, directed by Gordon Peters, are heard on Kendall LP-341. Selections are light, and classical from this admirable marimba ensemble.

Miss Vida Chenoweth's art is perpetuated in EPIC BC-1153 (or LC 3818), title: *Vida Chenoweth, Classic Marimbist*. Selections from Bach, Telemann (with flautist), Fissinger, Musser and Goodrich. She plays the marimba alone, without accompaniment.

More recently, Paul Creston's *Concertino for Marimba and Orchestra*, and Robert Kurka's *Concerto for Marimba and Orchestra* have been available on EPIC Records.

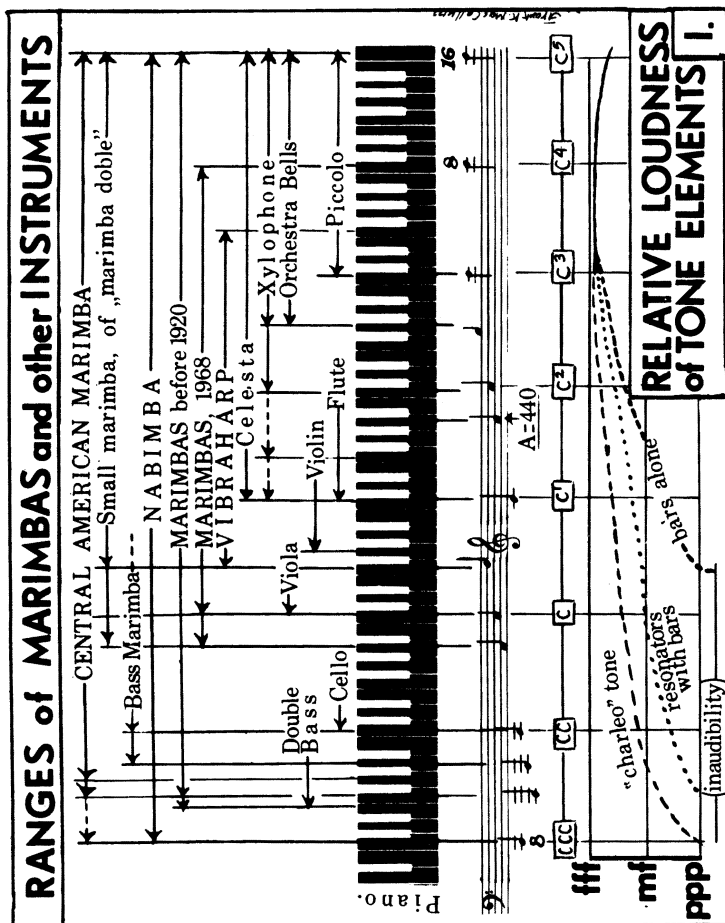
As far as the author knows, two other concerti have been written but have not been recorded: *Concerto pour marimba et vibraphone* by Darius Milhaud, and *Concerto for Marimba and Orchestra* by James Basta. All these concerti have been published.



Miss Vida Chenoweth,  
First Lady of the Marimba.

placed resonator, upon striking the bar the sawdust arranges itself instantly into ridges which represent the nodes of stationary sound waves. This same effect is obtained in Kundt's Experiment for the Speed of Sound, familiar to students of physics.

Del Roper uses "Helmholtz" type resonators (C) for his bass marimbas with the greatest of success. Construction is easier, and the tone is organlike. They have no buzzers.



# KEYBOARD DIMENSIONS\*

Widths:

4" 1/4"

3 1/4"

3"

2 5/8"

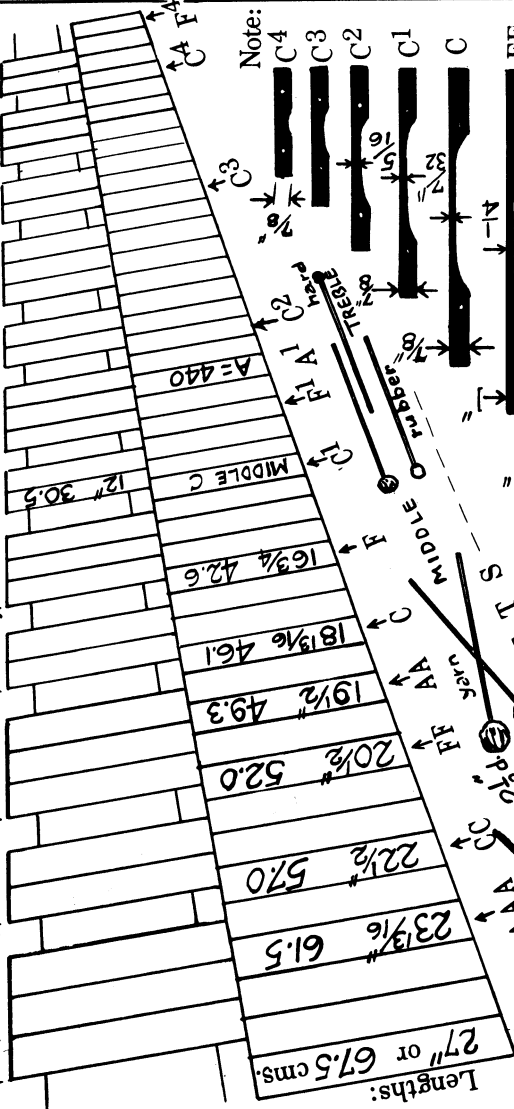
2 1/2"

2 1/8"

1 3/4"

1 1/2"

1 1/4"



Note:

C4

C3

C2

C1

C

FF

CC

AAA

Thickness of Bars

apx. 1/8"

3/32"

1/4"

1/2"

3/4"

1"

1 1/4"

1 1/2"

1 3/4"

2"

2 1/4"

2 1/2"

2 3/4"

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20 3/4"

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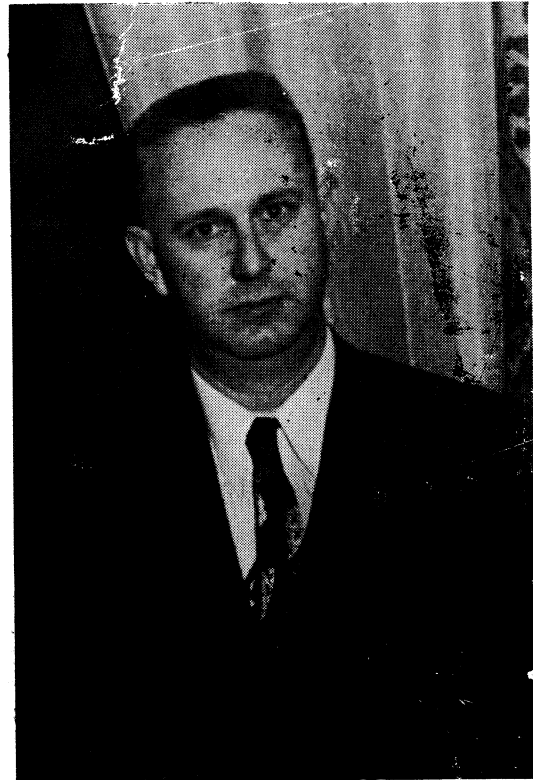
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From its hidden origins in African tribal folkways, when the Goddess Marimba created the instrument, Mr. MacCallum uses lore, fact and documentation to captivate, as well as educate the reader. He also presents a professionally practical book of instruction to the interested musician. That such a wealth of information is made available in one volume is good news, indeed, for the general reader and for the musical world, as well.



#### ABOUT THE AUTHOR

Frank K. MacCallum has shown marked musical talent since childhood, and all his life his talent and interest has centered largely on the study of the marimba. He has written many compositions for the marimba and for the piano, as well, and has been an instructor in marimba at University of Texas El Paso when the occasion demands. He is a graduate of this branch of the University of Texas, having taken his degree in English and sociology. After More than four years of army service during WWII, he began his career as research chemist which he has pursued until recently. He is now able to devote his life to music.