

# SOUNDSCAPE ECOLOGY

A PROMPT

INTRODUCTION





# COMMUNICATE

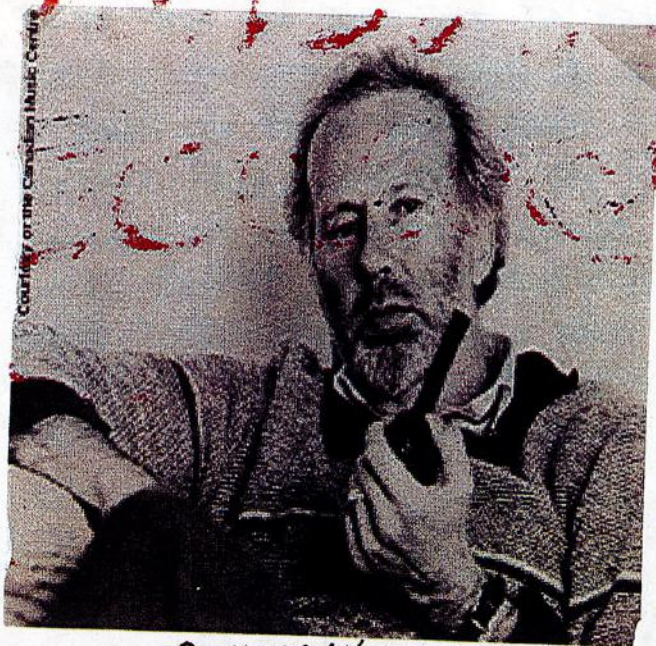
## ENCOUNTER

THIS ZINE IS WRITTEN  
TO DRAW NOTICE ~~TO~~ TO  
AN INCREASINGLY PREVALENT  
AND NEW FIELD OF STUDY.

HOPEFULLY, THE BEGINNINGS  
OF STUDIES IN SUCH A YOUNG  
FIELD CAN PEAK INTEREST  
IN THE READER, NO MATTER  
THEIR BACKGROUND,

THIS BRIEF INTRO IS FOR  
EVERYONE TO BECOME FAMILIAR  
WITH, ~~THE~~ IN ORDER TO  
SPREAD WORDS AND  
ENCOURAGEMENT FOR SAFE  
SOUND.





R. MURRAY SCHAFER

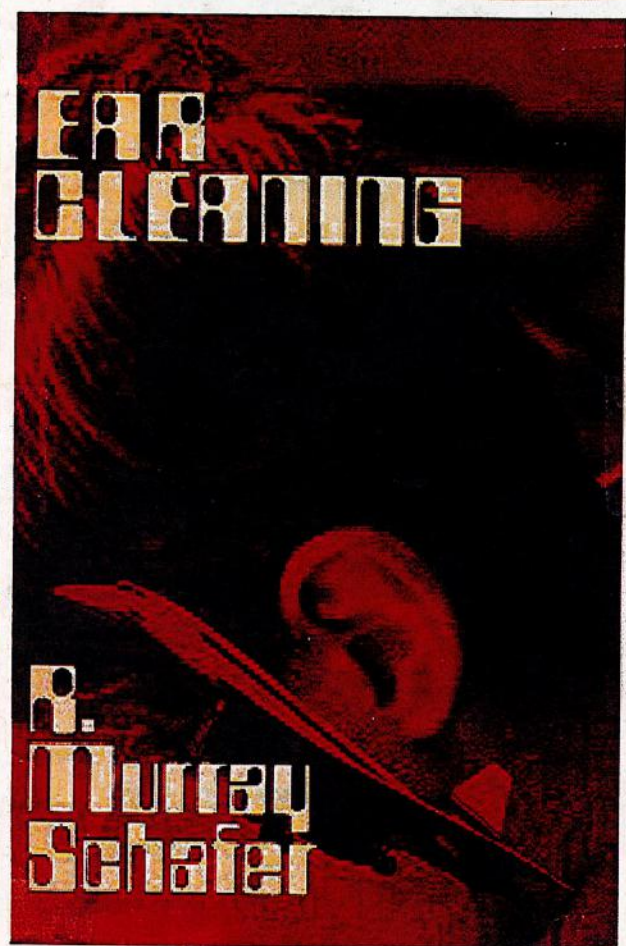
### SOUNDSCAPE ECOLOGY

STUDIES WERE BEGUN IN THE LATER 1960'S BY R. MURRAY SCHAFER AS A PART OF A TEAM THAT CREATED THE "WORLD SOUNDSCAPE PROJECT" (WSP). SCHAFER IS, HIMSELF, A WRITER, COMPOSER, TEACHER, AND ENVIRONMENTALIST AMONGST MANY OTHER THINGS. HE AND HIS TEAM FROM SIMON FRASER UNIVERSITY BEGAN THE WORLD SOUNDSCAPE PROJECT TO "FIND SOLUTIONS FOR AN ECOLOGICALLY BALANCED SOUNDSCAPE WHERE THE RELATIONSHIP BETWEEN THE HUMAN COMMUNITY AND ITS SONIC ENVIRONMENT IS IN HARMONY"



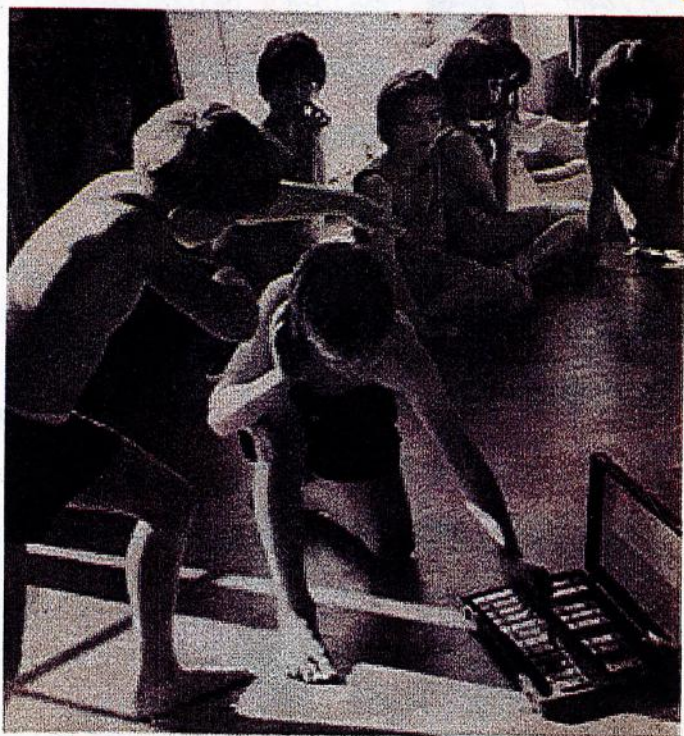
MULTIPLE SONIC STUDIES WERE ALREADY BEING UNDERTAKEN AT THE TIME OF THE WSP, HOWEVER SCHAFER'S STUDIES IN WHAT HE CALLED "ACOUSTIC ECOLOGY" WERE MUCH MORE ENCOMPASSING, PAVING THE WAY FOR INTERDISCIPLINARY STUDIES IN SOUND. BESIDES PINPOINTING THE DANGERS OF NOISE POLLUTION OR OTHER POPULAR SONIC STUDIES OF THE TIME LIKE PSYCHOACOUSTICS, SCHAFER WAS INTERESTED IN PEOPLE'S ABILITY TO TRULY LISTEN AND IN INCREASING THEIR OVERALL AWARENESS OF

THE SOUNDS  
OF THEIR  
ENVIRONMENT



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Photograph by John P. Jones

SCHAFER REFERRED TO  
THIS TYPE OF AWARENESS AS A  
PERSON'S "SONOLOGICAL COMPETENCE"  
HE STRONGLY ADVOCATED NEW  
PRACTICES IN ORDER TO BUILD MORE  
SONOLOGICAL COMPETENCE WORLDWIDE.

HE SUGGESTED PRACTICES IN "EAR  
CLEANING" AS A SORT OF HYGENIC RESPONSIBILITY  
AMONGST ~~THESE~~ REGULAR PRACTICES ~~WERE~~ <sup>WERE</sup> FEDERALLY  
MANDATED "SOUND WALKS" AS A PART OF



## SCHOOL CURRICULUM.

YOUNG STUDENTS, HE BELIEVED, COULD  
BE TAUGHT ~~AND~~ BETTER SONOLICAL  
COMPETENCE THAN THEIR ELDERS.

IN "CLEANING" THEIR EARS. AT A  
YOUNG AGE, YOUNGSTERS WOULD BE BETTER  
FIT TO CREATE HEALTHIER SONIC ENVIRONMENT  
FOR PRESENT AND FUTURE GENERATIONS.

AT THE CORE, SCHAFER'S STUDIES SEEM TO FALL IN LINE WITH MORE ANTHROPOLOGICAL (GEARED) AMBITIONS, OFTEN CONFUSED WITH <sup>THE</sup> SPECIFIC DANGERS OF NOISE POLLUTION TO HUMANS AND LOSS OF HEARING. HOWEVER, HIS STUDIES HAVE BEEN PICKED OVER AND EXPANDED UPON BY SCHOLARS OF SEVERAL FIELDS.

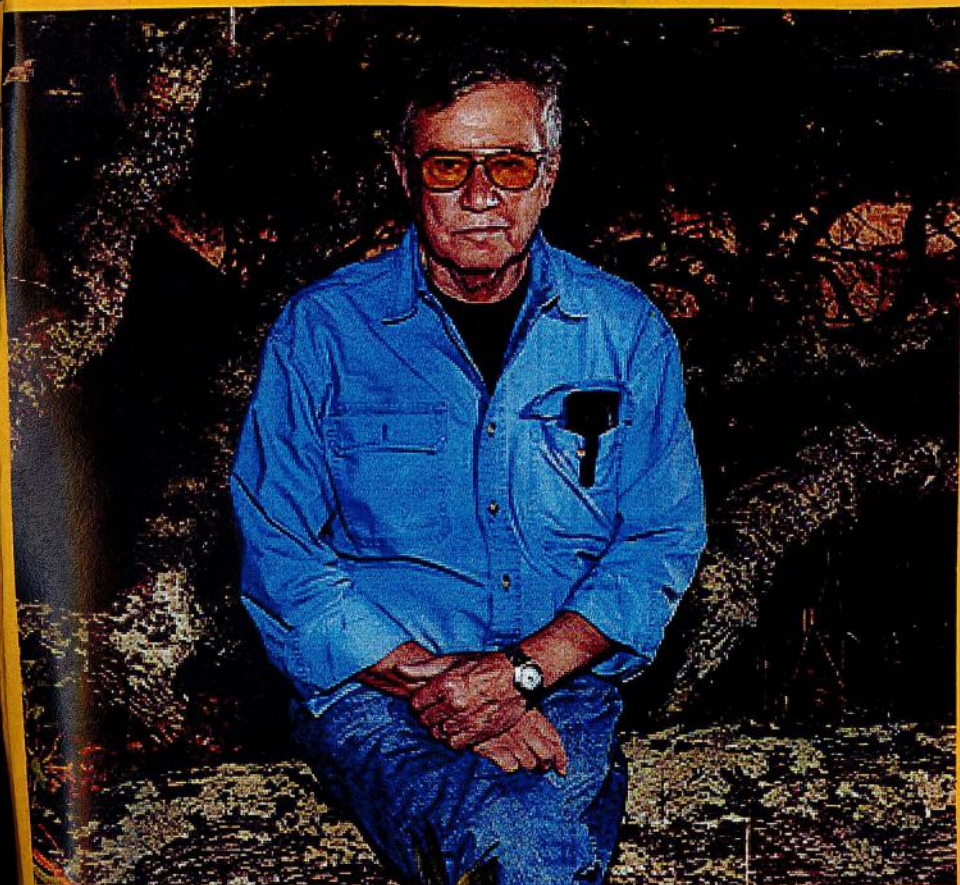




AMONGST THESE MANY RESEARCHERS IS  
DR. BERNARD L. "BERNIE" KRAUSE.

BERNIE KRAUSE, AN <sup>OTHER</sup> (AMERICAN) MUSICIAN,  
RECORDIST, BIO-Acoustician, AND ECOLOGIST  
WHO BEGAN ARCHIVING RECORDINGS OF  
NATURAL SOUNDSCAPES IN THE LATE 1970'S.

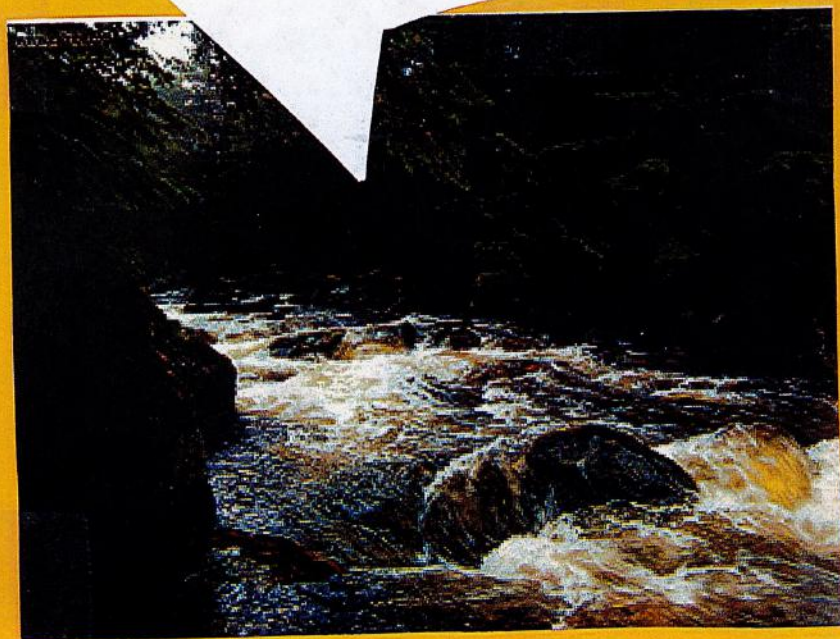
HE BELIEVES THERE ARE THREE  
TYPES OF SOUND THAT COMPRISE ANY  
NATURAL SOUNDSCAPE. THE GEOPHONY,  
BIOPHONY, AND ANTHROPHONY.



# GEOPHONY

NATURALLY OCCURRING  
GEOPHYSICAL SOUNDS

- WIND
  - RAIN
  - STREAMS
  - MOVEMENT OF  
THE EARTH
- > WAVES





# BIOPHONY



THE SOUNDS ORIGINATING  
FROM BIOLOGICAL ORGANISMS

- NON-HUMAN ORGANISMS IN A GIVEN HABITAT — AT ONE TIME, AND IN ONE PLACE
- INSECTS, BIRDS, MAMMALS, REPTILES, AMPHIBIANS, ETC.



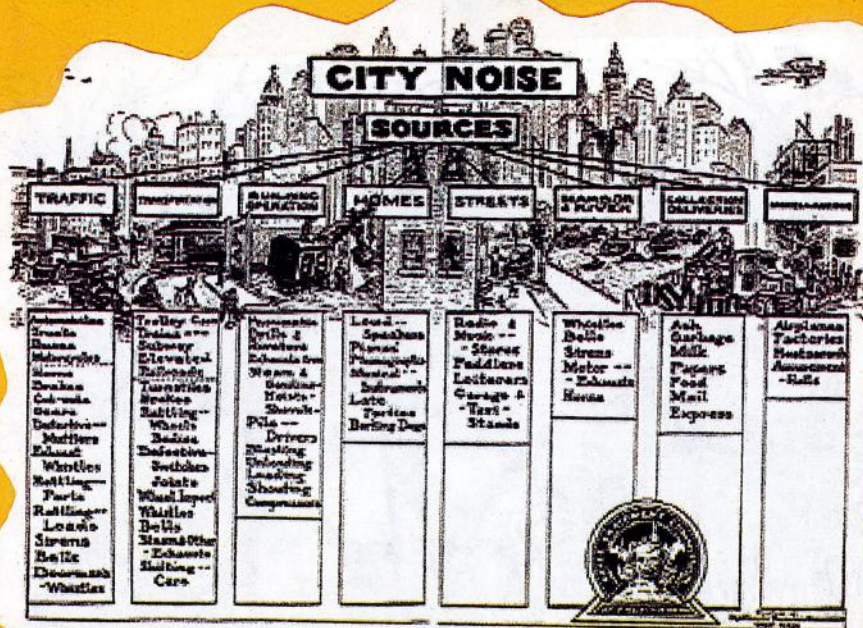


# ANTHROPHONY



ALL SOUNDS THAT WE  
HUMANS GENERATE

- SOME ORGANIZED (MUSIC)
- SOME CHAOTIC (NOISE)
- TRAFFIC, INDUSTRIAL NOISE,  
INSTRUMENTS, ETC.

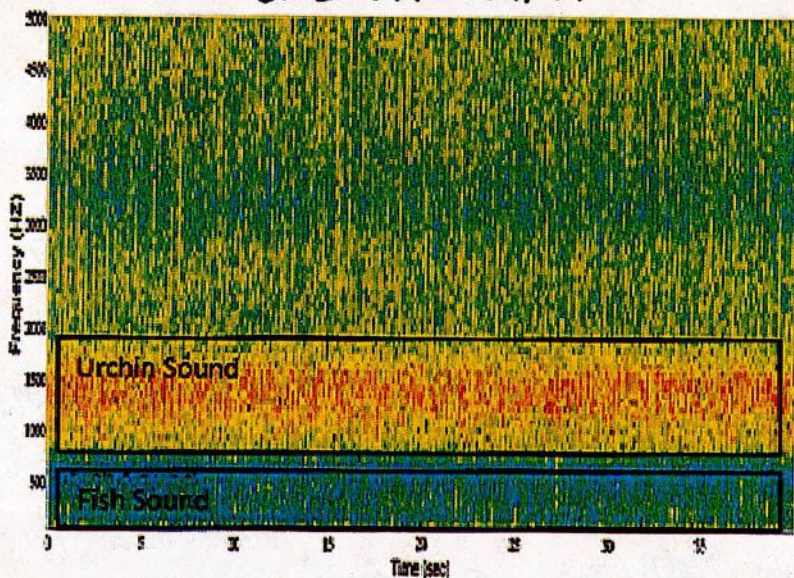




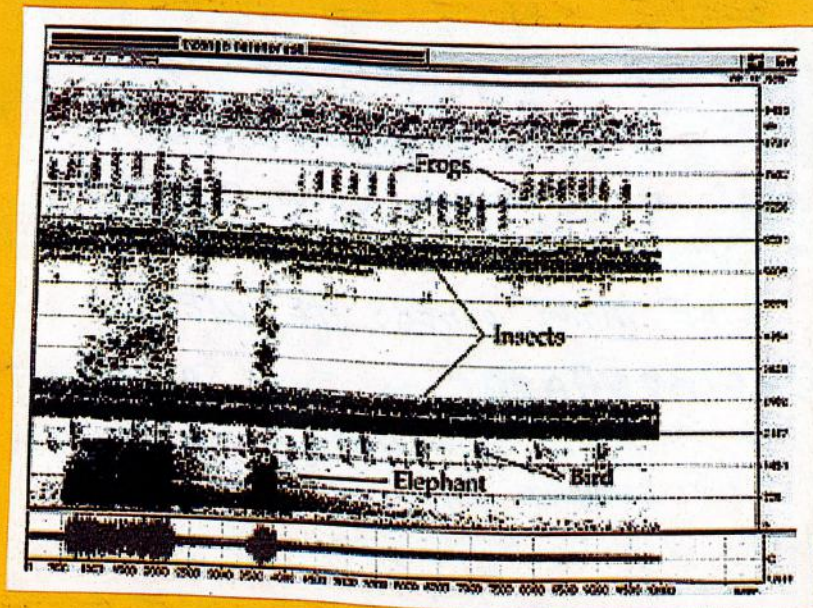
BERNIE KRAUSE HAS USED MOST OF HIS RECORDINGS TO STUDY SEVERAL BIOPHONIES AS PARTS OF NATURAL SOUNDSCAPES IN VARIOUS REGIONS.

LIKE MANY OTHERS, HE USES **SPECTROGRAMS** TO STUDY SOUNDSCAPES AND PINPOINT NON-HUMAN, BIOLOGICAL SOUNDS. ~~THAT~~ THIS INSTRUMENT GIVES VISUAL REPRESENTATION TO THE SPECTRUM OF FREQUENCIES IN A GIVEN RECORDING. SEPERATE SIGNALS RECORDED BY **SPECTROGRAPHS** CAN BE EASILY IDENTIFIED ~~BY~~ THROUGH THEIR IMAGING SYSTEM.

### SPECTROGRAM







INTERPRETATION  
THROUGH THE ~~USE~~ OF SPECTROGRAPH  
IMAGES, BERNIE KRAUSE POSITED HIS

"NICHE HYPOTHESIS"

DEFINED AS

"THE ACOUSTIC BANDWIDTH PARTITIONING  
PROCESS THAT OCCURS IN STILL-WILD  
BIOMES BY WHICH NON-HUMAN ORGANISMS  
ADJUST THEIR VOCALIZATIONS BY FREQUENCY  
AND TIME-SHIFTING TO COMPENSATE FOR  
VOCAL TERRITORY OCCUPIED BY OTHER  
VOCAL CREATURES."



KRAUSE WAS ABLE TO DISCOVER THIS PARTITIONING BY OBSERVING SEVERAL ORGANISMS AT ONE TIME, RATHER THAN THE POPULAR METHOD OF RECORDING <sup>THE</sup> FRAGMENTED SOUNDS OF INDIVIDUAL ORGANISMS.

BY DOCUMENTING ~~AND~~ SOUNDSCAPES AS WHOLE ECOSYSTEMS, KRAUSE IS ABLE TO HEAR FOR PATTERNS AND FOR WHAT IS MISSING. BECAUSE OF ANTHROPOLOGICAL NOISE, HE HAS CONCLUDED THAT MANY HUMAN PRACTICES ARE DRIVING ANIMALS FROM THEIR NATURAL HABITAT. BIRD POPULATIONS DIMINISH B/C OF TRAFFIC AND CONSTRUCTION. AQUATIC ECOSYSTEMS ARE DISRUPTED BY BOATS AND SUBMARINES. WHALES AND DOLPHINS BECOME CONFUSED WHEN THEIR SONAR COMMUNICATIONS ARE INTERRUPTED.

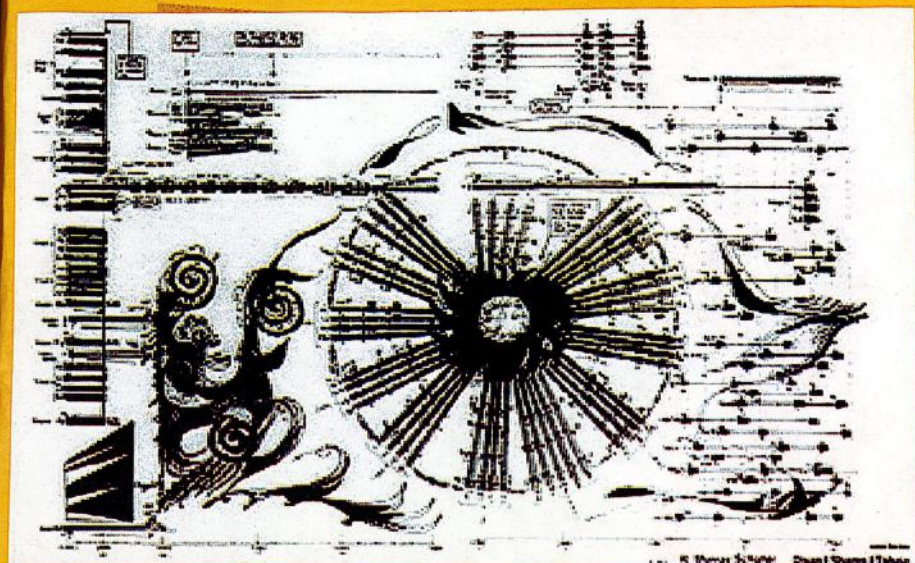
KRAUSE'S STUDIES, WHILE MAJORLY INFLUENTIAL, HAVE FOCUSED MAINLY ON <sup>NON</sup> HUMAN ~~COMPOSITIONS~~ COMPOSITIONS IN AND AROUND THE GLOBE.



ALTHOUGH ~~W~~ KRAUSE AND SCHAFER'S STUDIES DIFFER SLIGHTLY IN THEIR EMPHASES, THEY ARE BOTH INCREDIBLY INFLUENTIAL, AND SERVE AS LANDMARK BEGINNINGS TO A VERY IMPORTANT AND INTERDISCIPLINARY FIELD.

I WOULD ENCOURAGE THE READER TO USE THESE TWO MEN'S RESEARCH IN ORDER TO BUILD UPON THE SUBJECT. AS WITH SCHAFER'S STUDIES, HOPEFULLY WE CAN TEACH BETTER LISTENING TO FUTURE GENERATIONS. THESE FUTURE GENERATIONS CAN HOPEFULLY USE THEIR LISTENING SKILLS TO DESIGN A BETTER SONIC ENVIRONMENT FOR ALL LIVING ORGANISMS - HUMAN OR NOT.





... R. Strauss: Schwanen-Quintette



