

DENISE LIRA-RATINOFF

for

Waves and Ripples

at Jica Global Plaza, Tokyo, Japan

Enrique Rivera - Curator

2017



THE LASCAR VOLCANO

A powerful image of a crater of the Lascar volcano is a portrait that reveals a geographical site that is very hard to reach, where mysticism is fundamental in this ritual of ascending the mountain, with silence and respect, attracted by the magnetism of its strength and titanic dimensions, hoping in each step that the volcano would allow me to reach its peak and allow itself to be portrayed.

The internal conviction is extremely necessary to ascend its slope, to walk in synchronicity with conscious breathing, feeling different terrains and overcoming very low temperatures below zero, gave me the opportunity to face with my own eyes its entire magnificence filled with gases, strength, history of its activity also with a breathe, but this time the breathe of our planet Earth through the beat of its immense crater.

This life experience leaves you with a legacy of humility insofar as the perception of the world. It is a before and an after.

DENISE LIRA-RATINOFF









VOLCANIC GASES

The gases released by a volcano are called fumaroles and/or solfataras. Solfataras are fumaroles rich in sulfur gases.

Understanding gases dissolved in magmas is critical in understanding why volcanoes erupt as they provide the driving force that causes most volcanic eruptions. Volcanic gases are volatiles dissolved in the magma that when it rises and the pressure diminishes, are released from the liquid portion of the magma (melt). Gases continue traveling upwards and are eventually released into the atmosphere. H₂O, CO₂ and SO₂ are the most common volcanic gases. Other less abundant volcanic gases are CO, H₂S, CH₄, HCI, HF, etc.

Volcanic gases show a variety of compositions, the following being the most abundant:

- Water vapor (H₂O), the most abundant, white in color and harmells, similar to the steam released by a boiling kettle
- Carbon Dioxide (CO₂). Colorless and vital for life on Earth, although potentially lethal in high concentrations.
- Sulphur Dioxide (SO₂). Colorless gas, lightly yellow, by-product of the Sulphur combustion, with a characteristic asphyxiating smell. When mixed with water it dissolves and turns into highly corrosive sulphuric acid, which forms acid rain.

Other less abundant gases are:

- Hydrogen sulfide (H₂S), a gas heavier than air, inflammable, colorless, toxic, with a strong offensive odor. It smells like decaying organicv matter or rotten eggs. odoriferous: its smell is that of organic material in the process of rotting, such as rotten eggs (H₂S).
- CO: carbon monoxide, highly toxic, colorless gas and can be lethal when breathed in high concentrations.
- Cl, H, Ar, F compounds.

The gases emitted by volcanoes throughout the history of Earth have created our atmosphere and oceans, without which life, as we know it, would not exist.

Dr. Moyra Gardeweg P. Geologist / Volcanologist PhD



Volcanoes are the most direct proof of how alive and active our Earth is. When at rest they are beautiful landmarks to which much good is associated. When erupting they are dramatic, astonishing, they put on a wonderful show, which is also terrifying and dangerous. The history of both Earth and men is linked closely to volcanic activity. The best soils for agriculture result from the degradation of volcanic ash. Volcanic rocks provide good guality and also beautiful looking building rocks; some old churches in Perú and in northern Chile are a good example. Geothermal energy, a clean and not invasive form of energy, is mostly related to active volcanoes. Eruptions provide new material to the Earth surface and the gases of our atmosphere.

But what is a volcano?

When thinking of volcanoes we usually picture a symmetrical, conical-shaped hill like Osorno Volcano in southern Chile or Mount Fuji in Japan.

Yes... these are volcanoes but not all volcanoes have this shape and certainly not even Osorno or Fuji started their "volcanic life" with such stunning looks. A volcano, by definition is "a hole in the ground". When magma ascends from deep within the earth, a hole or crater is formed at the point where it reaches the surface for the first time.

As days, decades, and up to thousands of hundreds of years go by, successive eruptions "build-up" a volcanic edifice, the size, form and height of which will depend on multiple parameters. The dominant parameters that determine the form and size of a volcano are the physical properties and composition of the magmas, including volatile content. In addition, their planetary context, or as geoscientists like to call it, the tectonic setting, is relevant in defining how a volcano works and its morphology as it governs the processes and composition on the root zones of volcanoes

A series of tectonic plates that resemble a jigsaw puzzle, with different-size irregular pieces or plates form the Earth's surface. These plates are constantly moving against one another and their limits are characterized by earthquakes and often by volcanic activity. In addition, the way they interact along their contact determines a large number of geological and geomorphological characteristics, which in turn influence the landscape, occurrence of mineral resources and even the climate. The plates interact in three ways: they can diverge, that is separate from one another (divergent margin), convey and clash (convergent plate margin) or slip laterally. Volcanism is concentrated in the divergent and convergent plate boundaries and consequently volcanoes are not distributed randomly in the Earth's surface. Divergent or constructive plate margins are mostly hidden under the oceans, forming a 70.000 km-long nearly continuous ridge system known as mid ocean ridges. The mid-ocean ridges are thousands of kilometers long submarine volcanic chains located in the middle of the Atlantic Ocean, in the eastern Pacific Ocean and south of Australia and New Zealand. These ridges host the largest, although unknown, number of active submarine volcanoes, which seldom reach the surface, with Iceland being the notable exception. The constant eruption of these very active submarine volcanoes is permanently adding new oceanic crust of basaltic composition, drifting the ridge apart and pushing the divergent plates outwards. This constant production of new crust is compensated by its destruction in the convergent or destructive plate margins. In most convergent plate margins an oceanic and a continental plate or two oceanic plates clash, resulting in the descent of an oceanic plate into the Earth's mantle, process known as subduction. Most of the currently active subaerial volcanoes are formed above these subduction zones. They are responsible for more than 80% of the eruptions recorded in history, including the most violent and dangerous ones such as the 1815 eruption of Tambora Volcano, the largest in modern history, which lowered the global temperature in 3°C and the 1883 eruption of Krakatoa, also in Indonesia, whose explosion was heard 4500 kilometers away. In Chile, two of largest historic eruptions took place during the XXth century in the Quizapu Volcano (1932), in Central Chile and the Hudson Volcano (1991). In both cases large areas east of the volcanoes, and mostly in Argentina, were extensively covered by ash and pumice. A large number of the volcanoes

related to subduction zones are along the Pacific rim which led to name it "Ring of Fire". Eruptions along subduction zones are commonly highly explosive and thus form spectacular eruption columns that rise kilometers above the volcano and even form an umbrella or mushroom cloud. The eruption column is formed by a mixture of volcanic coarse to fine-grained volcanic fragments ejected violently into the atmosphere (pyroclasts; bombs, lapilli and ash), volcanic gases and water vapor. Prevailing winds will drift the eruption column to form a lateral plume than can travel thousands of miles affecting vast areas and even triggering Fuji in Japán or Mount Shasta in the US.

climate changes. Recent cases are the eruptions of Chaitén change. Volcanoes grow and become old. Some are short, others (2008-2010) and Cordón Caulle volcanoes (2011) in southern fat, some are very big and some are disheveled or broken. Their Chile, both extremely explosive and with severe impact in air form, size and the products of their eruptions always tell a story, navigation and agriculture. On the other hand, subduction maybe a very short life, a simple uncomplicated life or a very volcanism produces the undoubtedly most beautiful volcanoes complex one with big changes of character or eruptive style. of the world, such as Parinacota, Licancabur and Osorno in Chile, They can be beautiful or they cannot even look like a volcano, but they all start like a hole in the ground, as Cerro Negro de Lejía in northern Chile (Figure 1). Cerro Negro is a 600 m in diameter As the Altiplano of northern Chile, once called a "volcanic and 150 m deep crater formed south of the Lejía Lake, on the top wonderland" by one of the world's leading authorities in of a ridge of pink volcanic rocks called ignimbrites. The crater is volcanology, Bob Smith, is one of my very favorite places, a surrounded by an irregular halo of loose black dense lava blocks passion I share with Denise, the author of the amazing pictures (pyroclastic bombs), ejected violently during a single highly of this book, I will use some of the many volcanoes there as explosive eruption, sometime during the Holocene (last 11.000 examples. years), when the crater was formed. When driving through the Volcanoes are in some ways very similar to people. They are Altiplano, it is not visible until reaching its edge, but however alive, have personality and character that, as with people, can it is a volcano, a special type called maar. Much more volcano



Figure 2. Licancabur Volcano, a striking symmetrical cone-shaped composite volcano, which outstands east of San Pedro de Atacama. With 6-8 km in diameter is, at least 10 time larger than Cerro Overo. It rises 1700 m over its base with steep slopes and a summit crater with a shallow fresh water lake. It has long been considered sacred (revered?) by the original people of San Pedro de Atacama and the Incas, as shown by ruins of stone walls and altars built in the 5916 m summit, used for ritual ceremonies. The name Licancabur in kunza, language of the Atacameños, means mountain of the people of the highlands.



Figure 1. Cerro Overo de Lejía. A 600 m in diameter and 150 m deep crater formed south of the Lejía Lake, on the top of a ridge of pink volcanic rocks. Surrounded by a thin layer of basaltic pyroclastic bombs. This volcano, of the maar type, is comparable to the "whole in the ground" with which every volcano starts is constructive journey.

12:02:18 *desert 101* from the series Desert © Denise Lira-Ratinoff

Lascar (volcano) Altitude - Elevation 5592 m

Geographic position : Lat: -23° 22' 2.7" (WGS 84) Lon: -67° 43' 38.3"



looking is Licancabur, a stunning symmetrical cone-shaped volcano outstanding on the top of the Altiplano east of San Pedro de Atacama and visible from afar (Figure 2). Licancabur has a circular basal plan, 6-8 km in diameter, which rises 1700 m over its base with steep slopes. It shows a well-preserved 400 m in diameter summit crater that hosts one of the highest freshwater lakes in the world. Licancabur is a so-called composite volcano or stratovolcano with a single central vent or crater. It was built-up during successive eruptions of lava flows alternating with the products of more explosive eruptions (pyroclastic flow and fall deposits) that spread radially from the central vent. Early lava flows extend as far as 16 km to the west, over the ignimbrites plateau, while later and shorter lava flows alternate with pyroclastic deposits to build the cone. 60 km south of Licancabur is Lascar Volcano, the most active in the Andes of northern Chile. It shows a guite different shape than that of Licancabur (Figure 3), the result of a more complex and long-lasting story.

Lascar is an EW elongated composite and complex volcano built along more than 200,000 years ago, formed from coalesced products of multiple, closely spaced, vents. The source vent has shifted position through time, along an ESE–WNW lineament, producing a system of five nested craters and two overlapping truncate cones (Figure 4). The edifice is 6.5 by 5 km in diameter and has a maximum height of 1400 m on the western flank, and 600 m on the eastern flank. The summit craters range from 400 to 900 m in diameter, the central one with persistent fumarolic activity, more visible in the early morning. During its evolution and build-up, Lascar has had many changes, besides shifting vents. Its eruptive style varied from effusive and little explosive in early stages when it produced beautiful, up to 16 km long dark andesitic lava flows, of which only heaps of rounded eroded boulders remain in its western flank. 25000 years ago, it shifted to a more violent explosive activity and formed a more than 30 km high eruption column with silica-rich composition (dacite) pyroclastic components. The collapse of this large column formed a voluminous pyroclastic flow that traveled 30 km westward, the front of which outcrops close to the Atacama Salar. The largest historic eruption of Lascar took place on April 1993, with an impressive 20 km high eruption column, the top of which spread into a wide mushroom cloud that was drifted eastward by high altitude winds. The pyroclastic material transported by the plume fell mainly east of the volcano, although the finer-grained portions (volcanic ash) covered NW Argentina extensively and reached the Atlantic coast, 1800 km further away. The base of the column collapsed over the volcano and spread over its flanks at great speed as a hot pyroclastic flow. The final deposit of this flow, shown as dark gray in Figure 4, is a mixture of various size-rounded pumice and dense lava blocks set in a fine-grained matrix of volcanic ash that took 2 months to cool down. It traveled as far as 10 km channeled by the Tumbres Quebrada, where it covered the water source of the village of Talabre, which had no fresh water supply for nearly 6 months.



Figure 3. Lascar volcano, a composite and complex long-lived volcano, built by many and different style eruptions along more than 200,000 years. It is formed by two overlapping truncated cones, capped by 5 nested summit craters. The name Lascar in quechua means tongue, after the tongue-shape lava flow on its northwest flank erupted about 7000 years ago.



Figure 4. Three dimension representation of Lascar and nearby volcanoes using a Digital Elevation Model (DEM) that allows showing terrain relief interpolating digital contour maps. In dark gray the distribution of the 1993 pyroclastic flow deposit is shown, channeled by the Talabre quebrada to the west and covering more extensively the southeast flank.

However, not all volcanoes are constructed by a succession of volcanoes, north of San Pedro de Atacama, is a pancake-shaped eruptions. Some of them are monogenetic; this is, formed during dome 300 m high and 4200 m of maximum diameter. Although a single eruption, hours, days or even years long. Usually onelarger than Negro de Barriales it shows a much lower aspect ratio eruption volcanoes are smaller, but not less beautiful. A particular (0.02). These and most domes share steep-sided walls, partially type, very common in the Altiplano, are the edifices called domes. covered by a talus apron, and a rugged surface. Domes are relatively small masses of lava produced in a single Chile is gifted and a little cursed with nearly 90 active volcanoes, eruption of high-silica lava (dacites and rhyolites), too viscous to both wonderful and dangerous. They keep volcanologists flow, consequently, on extrusion, the lava piles over and around permanently busy.... and let's face it, admittingly having great the vent. The form of this type of volcano is of a bulb, cupola or fun. dome, but some show a remarkable flat pancake shape. Good examples are the domes T Negro de Barriales and Torta. Negro de Barriales is a cupola type dome located 13 km south of Lascar. It is a steep sided mass of lava blocks, 370 m high, circular in plan DR. MOYRA GARDEWEG P. and 1700 m in diameter with an aspect ratio of 0,16 (height/ surface). In contrast, the Torta dome, close to the Tocorpuri GEOLOGIST/VOLCANOLOGIST PhD

TO BREATHE

DANGER - RISK

IMPACT - AMAZEMENT

BEAUTY - ATTRACTION

TO WALK - TO BEAT

ORIGIN - MOUNTAINS

LAVA - ERUPTION

EARTH - LIFE

Hazard is a potentially dangerous event, such as a lava flow, a falling volcanic bomb or a pyroclastic flow.

Risk is the likelyhood of a person or a property to be injured/killed/damaged etc. by a hazard. So, volcanic risk clearly depends on:

1) the timescale in question (e.g. the duration of the visit of a crater)

2) the location of the person/property3) the current state of the volcano

Tilling, R. I., 1993. Los Peligros Volcánicos, OrganizaciónMundial de Observatorios Volcanológicos (WOVO)

The volcanoes in Chile are monitored with seismometers, tiltmeters, accelerometers, still cameras, GPS, DOAS and equipment for infrasound detection.

Seismometers: are instruments that record the waves originated by ground vibrations induced by volcanic activity. According to the number of stations and their configuration they deliver information that allows to determine the origin of the seismic signals, their energy or magnitude, and the location and type of the activity that generates it.

Tiltmeter: Instrument used to measure ground tilt (rotation), a useful methodology to detect changes in the internal dynamics of a volcano or volcanic zone.

Accelerometers: As the Seismometer, it is an instrument used to measure ground vibrations. In this case, it measures the acceleration of a particle in the monitored site. Accelerometers are particularly useful for measuring moderate to high magnitude seismic events (MI>3). This is the reason why they are often called strong motion equipment.

DOAS (Differential Optical Absorption Spectroscopy): Methodology used to determine the trace concentration of certain gases by measuring their absorption of UV radiation. It is commonly used to estimate concentrations and flows of SO₂ (Sulfur dioxide).

Dr. Moyra Gardeweg P.



DENISE LIRA-RATINOFF

Born in Santiago, Chile. Studies in Chile and USA. Lives in Santiago and works between Chile, United States and Germany

ARTIST RESEARCH

- 2012-2013 Atacama, Expeditions, Chile
- 2012-2013 ALMA, Atacama Large Millimeter Array, Chile
- 2013-2014 Atacama Walks with Shepherds, Chile
- 2009-2011 Oceans, Expeditions, Worldwide
- 2007-2008 Glaciers, Expeditions, South America
- 2001-2003 Vineyards, Expeditions, Chile

HONORS & AWARDS

- 2016 Nomination at the 10th Annual International Color Awards, with her photograph ALMA (The Atacama Large Millimeter Array), North of Chile, Worldwide
- 2015 Honorable Mention at the 9th International Award Honoring Color Photography, with her photograph Atacama Desert from the Trilogy Natural Cycles of Nature.
- 2011 Nomination at the 5th Annual Photography Master Cup, The International Award Honoring Color Photography, photograph Ice 24 from the series Glaciers, Worldwide
- 2008 Best Art Event of the Year, Critics' Picks, Creative Loafing, Atlanta, GA, USA

At First Sight II (video + sound and photography Installation), Loading Dock, 1280 W Peachtree, Atlanta, GA, USA

- 2006 Purchase Award Darby Bank & Trust Company (Photography), Savannah, GA, USA
- 2000 Commission for Chilean Government for a Monumental Installation, Santiago, Chile
- 1999 Awarded Best Young Artist, First Prize, XXI National Competition of Art, Chile
- 1998 Honorable Mention, XX National Competition of Art, Chile
- 1997 Honorable Mention, XIX National Competition of Art, Chile

SELECTED SOLO EXHIBITIONS

- 2017 Breathe-Respirar (Photography Installation + Video + Sound). December, Galería Patricia Ready, Santiago, Chile Sand, Ice, Water (Photography Installation + Sound), Curator Veronica Cuomo Grunauer. Zurich, Switzerland
- 2016 Sand, Ice, Water (Photography Installation), Quilvest Wealth Management, Santiago, Chile
- 2013 Oceans (Photography Installation), Plaza San Pedro de Atacama, World Water Day, North of Chile, Chile
- 2010 Art and Time I, At Fisrt Sight, Curator Mar Morosse (Multi-Channel Video + Sound and Photography), New York, USA

- Drawing & Painting
- Interventions
- Installations / Public Art
- Photography
 - 2008 Elements (Photography), Hagedorn Foundation Gallery, Atlanta, GA, USA

At First Sight II (video + sound and photography Installation), Loading Dock, Atlanta, GA, USA

- 2006 At First Sight (Sound + Photography Installation), Galeria Patricia Ready, Santiago, Chile
- 2004 MoViendo (Photography Installation), Espacio Enrique Concha, Santiago, Chile
- 2002 Chepica Bermuda (Photography, Video + Sound and Nature Installation), Galeria Artco, Lima, Peru
- 2000 Nictagenia (Installation), Red House Museum (Museo Casa Colorada), Santiago, Chile

SELECTED ART FAIRS / FESTIVALS

- 2011 The Armory Show, New York, United States Galeria Isabel Aninat (Photography Installation)
- 2010 Pinta London, The Modern & Contemporary Latin American Art Show, London, UK

Galeria Isabel Aninat (Photography Installation)

- 2009 Pinta New York, The Modern & Contemporary Latin American Art Fair, New York, United States Galeria Isabel Aninat (Photography Installation)
- 2008 4th SP-arte, International Art Fair, Sao Paulo, Brazil, Galeria Florencia Loewenthal (Photography Installation)
- 2006 FOTOAMERICA 2006, 2nd Festival of Photography, Galeria Patricia Ready, Santiago, Chile

At First Sight I (Sound + Photography Installation),

- 2005 ArteBa 2005 14tth Edition Contemporary Art Fair, Buenos Aires, Argentina (video + sound and photography Installation)
- 2002 III Bienal Iberoamericana de Lima, Peru, Galeria Artco, Chepica Bermuda (Photography, Video + Sound and Nature Installation)

SELECTED PUBLIC ART

2006 Vineyard (Multi-Channel Video + Sound and Photography), Memorial Health Hospital, Hoskins Biomedical Center. Savannah, GA, USA

> Grass (Multi-Channel Video + Sound and Photography), Memorial Health Hospital, Savannah, GA, USA

Vineyard (Multi-Channel Video + Sound and Photography), Duggal Visual Solutions, New York, USA

2003 Vineyard (Multi-Channel Video + Sound Projection), LAN Chile, Music & Wine, Santiago, Chile 2000 Straw House. Monumental Public Installation in the middle of the Highway, Collaboration project with Chilean video artist Isabel Garcia. Santiago, Chile

PORTFOLIO REVIEW & VISITING ARTIST INVITATIONS

- 2017 La evolución histórica de la fotografía femenina como manifestación artística, invited by National Museum of Women in the Arts, UBS & Christie's. Santiago, Chile Diary of an Ephemeral Road, Artist Talk, February, Zurich, Switzerland
- 2016 Diary of an Ephemeral Road, Exhibition & Artist Talk, Quilvest Wealth Management, Santiago, Chile
- 2013 Savannah College of Art & Design, Artist Talk & Portfolio Reviews, Silver & Ink Event, Savannah, GA, USA
 Aconcagua Summit 2013, Portillo, Chile
- 2008 Skorpios III, Artist Talk about the series Glaciers, South of Chile, Chile

SELECTED GROUP EXHIBITIONS

2017 Photography Museum NRW-Forum, Grieger Relaunch. Düsseldorf, Germany

> Waves and Ripples, Enrique Rivera Curator. Jica Global Plaza, Tokyo, Japan

- 2010 Christie's Green Auction, A Bid to Save the Earth, Christie's New York, USA
- 2008 Waterscapes, Gallery Walk at Terminus, Marianne Lambert, Curator. Atlanta, GA, USA
- 2007 Route 68 Km 9 (Video Screening), High Museum of Art, Atlanta, GA, USA

Small Works, Casa de Cultura, Alamos, Sonora, Mexico

Photographers Now, Musee de l'Elysee, Lausanne, Switzerland

- Photography Show, The Defoor Centre, Atlanta, GA, USA
- 2006 Incisiones, Museo de Artes Visuales MAVI, Santiago, Chile
- 2002 Foto Vision, Club Empresarial San Isidro, Lima, Peru
- 2000 Expecta 2000, Arturo Duclos, Curator. Galeria Animal, Santiago, Chile

Arte para Videntes, Arte para no Videntes, Galeria Ventura Lavalle, Santiago, Chile

Libros de Artistas Latinoamericanos, (LatinAmerican Book of Artists). Galeria Petroperu, Lima, Peru

1999 Laboratorio 8, Galeria Balmaceda 1215, Santiago, Chile Arte Joven (Young Art). National Museum David J. Guzman, San Salvador, El Salvador

XXI National Competition of Young Art and Poetry, Valparaiso, Chile

- 1998 Bi Regional Exhibit, Museum Emiliano Guiñazu, Casa de Fader, Mendoza, Argentina
- 1997 Dialogos del Oficio, Galeria Luz y Oficio, Havana, Cuba

SELECTED PUBLICATIONS	
2011	At first sight – Denise Lira-Ratinoff, Arte Global Al Limite Magazine, March-April Issue 47, pgs. 108-115, Chile
2010	Pinta London 2010 The Modern & Contemporary Latin American Art Show, Catalogue, Galeria Isabel Aninat G-04 pgs. 28-29, UK
	Christie's Green Auction "A Bid to Save the Earth", Catalogue Silent Auction Highlights, Lot # 200058, New York
2009	Pinta New York 2009, The Modern & Contemporary Latin American Art Fair, Catalogue, Galeria Isabel Aninat M-20, pgs. 34-35, USA
	A Visual Dialogue between Life & Death: Colectivo Aninat & Swinburn and Denise Lira-Ratinoff, Arte Global Al Limite Magazine, Nov-Dec Issue 39, pgs. 90-91, Chile
	Feria Pinta 09, New York, Al Limite newspaper, nov. n#53 pg. 10, Santiago, Chile
	Coleccion Arte Joven Universidad Finis Terrae, pgs. 30 & 137, Santiago, Chile
	Wine Lovers (<i>Water 02 Photograph</i>), Placeres Magazine, pgs. 28-29, Santiago, Chile
2008	10 Years, Catalogue Galeria Balmaceda, pgs. 46-49, Santiago, Chile
	16:03:27 , Photography Book by Denise Lira-Ratinoff. ISBN: 978-956-319-249-0. Publisher: Openmade, Chile
	At First Sight II, Arte al Limite Magazine, March/April 2008, Issue 30, pgs. 74-75, Chile
	At First Sight II, Photograph Magazine, March/April 2008, Vol 5 number 4, pg. 131, USA
	EXPO Arte al Limite 08, Arte Al Limite Newspaper, March 2008 Year 4, N#34 pgs. 1-2, Chile
2007	Due South, a juried publication of photography in the southeast, USA
	Silverworks 2007, Catalogue of honored works Photo- graphy Dept. Savannah College of Art and Design, GA, USA
2006	FOTOAMERICA 2006, 2 nd Festival of Photography, Catalogue, ISBN: 956-7631-20-4, Santiago, Chile
	At First Sight, Catalogue Solo Show, Galeria Patricia Ready, Santiago, Chile
2005	ArteBa 2005, 14t th Edition Contemporary Art Fair, Catalogue, E7 – pg. 100, Buenos Aires, Argentina
2004	Cover Photograph, <i>Contacto</i> , Kodak Professional Magazine, Portfolio, October, Cono Sur, South America
2000	Daily Installations Cycle, Catalogue, Museo Casa Colorada, Santiago, Chile
	Memories 01- 2000/2001, Catalogue, Galeria Animal, Santiago, Chile
	Expecta 2000, Curated by Arturo Duclos, Catalogue, Galeria Animal, Santiago, Chile
1999	Laboratorio 8, Catalogue, Galeria Balmaceda 1215, Santiago, Chile
1995	<i>El Paraiso de mi Tierra</i> (The Paradise of My Land), Book, Denise Lira. ISBN: 95.094, Santiago, Chile

SELECTED BIBLIOGRAPHY

2017 García, Gabriela, Oficina con Vista, Interview, Magazine YA, El Mercurio Newspaper, July. 11. pag. 20, Chile García-Huidobro, Soledad, Sobre la Piel de la Tierra, Interview, Magazine MásDeco, La Tercera Newspaper, May. 20. pag. 3-6, Chile

> Espinoza, Denisse, Denise Lira: la fotografía como travesía vital, Review, La Tercera Newspaper, April. 29. pag. 90-91, Chile

La Magia de la Fotografías, Event, Magazine Cosas, April. 28. pag. 147, Chile

Ortiz de Rozas, Marilú. La Naturaleza Extrema que expone la artista Denise Lira, Review, El Mercurio Newspaper, Feb. 09. pag. A9, Chile

Pernod, Nana. Atemberaubende chilenische Fotografie, Ensuite Magazine, Jan. Issue 169, Switzerland

Mena, Catalina. Esto no es un Paisaje, Paula Magazine, 2016 Dec. Issue 1216, pags. 18-20, Chile

> de la Sotta, Romina. 2016. Certamen Fotográfico destaca a Denise Lira, Obtuvo Mención Honrosa en el 9th Annual International Color Awards, El Mercurio Newspaper, March 30, pag. A12, Chile

2011 Williams, Janaya. 2011 Armory Art Show Spotlights Latin American Art, March 3, wnyc.org

Wainwright, Jean. Armory Show 2011 - Latin America Focus, March 3, The Art Newspaper Digital

The Armory Show puts its 'Focus' on Latin American art, March 2, MutualArt.com

Ortiz de Rozas, Marilú. The Armory Show, Denise Lira sigue su Trilogía, Review, El Mercurio Newspaper, March 1, Chile

2010 Muñoz Cisternas, Melody. Pinta Londres, ExpressNews, Pag. 28, UK

> Lara, Carolina. Pinta Londres Globaliza el Arte Latinoamericano, El Mercurio, Cultura, pag. A21, Chile Sales, Milena. La Primera Gran Subasta Ecológica / A Bid to Save the Earth, Bora Magazine. Issue 28, Year # 7, pag 32, Chile

Telias, Raquel. Agua, Review, Magazine + Decoración, La Tercera Newspaper, March 27. Pag.13, Chile

2009 López, Macarena. Pinta se Consolida en Nueva York, Review, Magazine + Decoración, La Tercera Newspaper, Dec. 12/12. pags. 22-23, Chile

> Ortiz de Rozas, Marilú. Feria de Arte Contemporáneo, Arte Latinoamericana al alza en New York, Review, El Mercurio Newspaper, Nov. 21. pag. A19, Chile

2008 Vitols, Valentina. Beyond Photo Elemental, Interview, ARTVOICES Magazine, Dec. Issue 10 pags. 37-38, USA Michaud, Debbie. Best Of Atlanta 2008, Art Review and Year Selection, Creative Loafing, pags. 29-34, USA

> Lester Travelino, Amanda. The Radar Design, Art Review, The Atlantan Magazine, August Issue, pags. 43-44, USA

> Cullum, Jerry. Photos Capture Elemental Change, Art on the Edge in Atlanta, Art Review, VIZART AJC, June 26, USA

Hicks, Cinqué. Ice Castles, Art Review, Bare & Bitter Sleep, March 20, USA

Bos, Monique, Lira-Ratinoff offers viewers "First Sight", Art Review, The Chronicle-ATL, Feb 29, USA Cabezon, Isidora. An eye for Simplicity, Interview, Arte Al Limite Magazine, January/February issue 29, Chile

- 2007 Arcos, Natalia. 21 Artists to Celebrate, Art Review, Arte Al Limite Magazine, Nov-Dec 2007, issue 28, Chile
- Fonseca, Mario, Discreciones, Art Review, El Mercurio, 2006 November 21, Chile

At First Sight I, Art Review, Bora Magazine, Dec-Jan 07 issue 12, Chile/Argentina

Mujeres tras el Lente, Art Review, Arte Al Limite, Nov 2006 Year 2, N#20 pg 8, Chile

Stark, Turia. SCAD graduate student seeks to comfort others through art, Interview, The Chronicle, Oct 20, USA Darby Bank & Trust CO Awarded Ceremony, Art Review, Darby Bank Newsletter, USA

Murua, Macarena. Incisiones, Art Review, El Mercurio, March, Chile

- 2003 Gardeweg, Carmen. Talentos en Avanzada 2003, Interview, La Segunda, Julio 25, Chile
- 2002 Arte para Videntes, Art Review Straw House, ARQ 50 Magazine, Architecture, Design and Urbanism, March, Chile Olivares, Francisca. La Naturaleza es el soporte de mi trabajo, Interview, Cosas Magazine, #242, April 26, Peru
- 2001 Castel, Jordi. Fotosintesis, El Mercurio, March 31, Chile
- 2000 Sommer, Waldemar. Expecta 2000, Art Review, El Mercurio, Artes y Letras, December 24, Chile Rosenfeld, Daniela. Nictagenias, Art Review, El Mercurio, October21, Chile

SELECTED MULTIMEDIA

- 2017 Sand Ice Water. Zurich, Switzerland. Multimedia produced by FOREVER-CHILE.
- Making off Atacama Desert. Multimedia produced by 2016 FOREVER-CHILE, Chile Ice 13 and Water 01 from the series Glaciers, SCAD Collec-

tion, presented by ABC and SONY Entertainment, USA

2015 Endless Poetry. Art Direction by Denise Lira-Ratinoff & Patricio Aguilar. Directed by Alejandro Jodorowsky. Chile

COLLECTIONS

- Museo Nacional de Bellas Artes, Santiago, Chile
- Museo de Artes Visuales, MAVI. Santiago, Chile
- Musee de l'Elysee. Lausanne, Switzerland
- Memorial Health Hospital. Savannah, GA, USA
- Eurocapital. Geneva, Switzerland
- MBA Lazard Bank. Buenos Aires, Argentina
- Darby Bank and Trust Company. Savannah, GA, USA
- Savannah College of Art and Design, Atlanta, GA, USA
- Universidad Finis Terrae. Santiago, Chile
- Universidad de Valparaiso, Valparaiso, Chile
- Private Collections in Europe, North America and South America

ENERGY

ACTIVITY

MEASUREMENT

DYNAMICS

DISTURBANCES

ACCELERATION

MAGNITUDES

ABSORPTION

CONCENTRATIONS

POWERFUL

STRENGTH

CONVICTION

BEAT







Dedicated to Patricio Aguilar

